MANUFACTURERS' RECORD

Chief of Bureau of Statistics

A WEEKLY SOUTHERN INDUSTRIAL RAILROAD AND FINANCIAL NEWSPAPER.

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$4.00 per year. Single Copy 10 Cents.

VOL. XXII. No. 11

Baltimore, October 14, 1892.

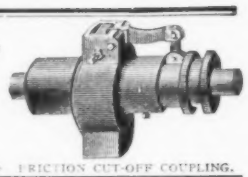
THE JAMES SMITH WOOLEN MACHINERY CO.

WOOLEN MACHINERY AND CARD CLOTHING OF EVERY DESCRIPTION.
SHAFTING, HANGERS, PULLEYS AND FRICTION CLUTCHES.

Hub Friction Clutch Pulleys will run 1,000 Revolutions.

Made in sizes from 2 up to 1 000 horse-power. More than ten thousand in use.

411 to 421 Race Street, PHILADELPHIA, PA.



FRICTION CUT-OFF COUPLING.

SPECIAL NOTICE.

BRANCH OFFICES:
114 Queen Victoria St., London, E.C., Eng.
160 W. Washington St., Chicago, Ill.
201 St. James Street, Montreal, Can.
202-204 Congress St., Boston, Mass.
610 N. Fourth St., St. Louis, Mo.
28 S. Water St., Cleveland, Ohio.

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"RECENT IMPROVEMENTS IN AIR COMPRESSORS,"
"RECENT IMPROVEMENTS IN ROCK DRILLS,"
mailed free to any one who will cut out this advertisement and mail it to us with his name and address.

THE INGERSOLL-SERGEANT DRILL CO., NO. 10 PARK PLACE, NEW YORK

The BROWN HOISTING & CONVEYING MACHINE CO., CLEVELAND, OHIO, U. S. A.

MANUFACTURERS AND SOLE PROPRIETORS OF THE PATENTS, APPLICATIONS AND DESIGNS UNDER WHICH THE BROWN HOISTING AND CONVEYING APPARATUS AND VARIOUS TRAMWAYS FOR IT ARE BUILT.

NEW AND COMPLETE LABOR-SAVING SYSTEMS FOR HANDLING OF MATERIALS OF ALL KINDS. MACHINERY SPECIALLY ADAPTED FOR HANDLING PHOSPHATE.

The Brown Patent

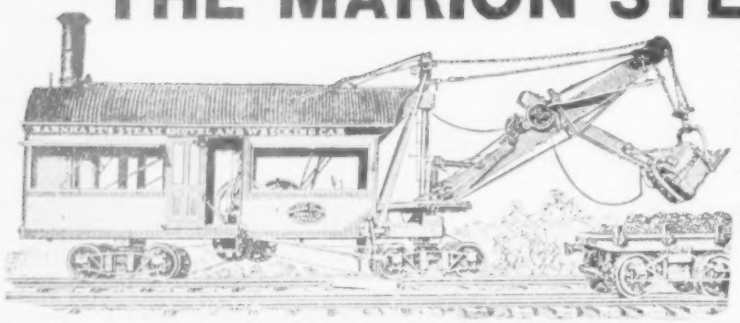
Cable Tramway System.
Suspended Beam Tramway System
Bridge Tramway System.

Shed Tramway System.
Warehouse Tramway System.
Sewer Machine Tramway System.
Continuous Elevated Tramway System

THE FAYETTE-BROWN PATENT AUTOMATIC FURNACE HOIST.

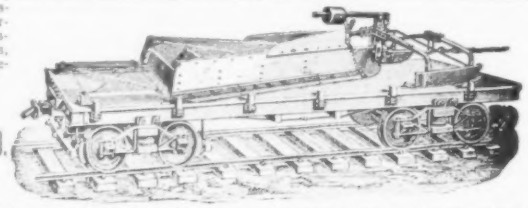
THE MARION STEAM SHOVEL CO.

MANUFACTURERS OF



Barnhart's Steam Shovels, Dredges, Ditching Dredges, Railroad Ditchers, Wreckers, Ballast Unloaders, &c. Our Steam Shovels are largely used on Railroads and by Contractors, Brick Manufacturers, and in excavating Iron Ore, Handling Stock Ore, Stripping Coal Fields and Stone Quarries, and are a most desirable machine for any use where excavating machinery can be used. All of our machines guaranteed to give entire satisfaction; otherwise may be returned at our expense. For illustrated Catalogue, Photographs, and any further information desired, address

THE
Marion Steam Shovel Co.
601 WEST CENTRE ST.
Marion, Ohio.



BARNHART'S BALLAST UNLOADER. No center rib or leader is required.

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ATLANTA, GA.

Manufacturers of

Highest Grade Saws

Also Dealers in Saw Mill Specialties.

OUR INSERTED TOOTH SAWS have been thoroughly tested on all feeds and in all kinds of timber. Saw mill men concede it to be the strongest and easiest adjusted on the market. We guarantee price and quality.

Prompt Attention Given to All Kinds of Repair Work and Satisfaction Guaranteed. Write for Catalogue and Prices.

The Delbert Engineering Co., Limited. New Orleans, La.

Save Steam. Avoid Condensation. Do away with Cracking and Drying of Woodwork in Factories or on board Steamers, Tugs, etc., by using the

MAGNESIA SECTIONAL PIPE AND BOILER COVERINGS.

IN USE IN NAVY AND PUBLIC BUILDINGS.

BARR STEAM PUMPING MACHINERY FOR WATER WORKS AND ALL PURPOSES.

STEAM BOILERS, CORLISS ENGINES, HEATERS AND INJECTORS.

THE LEADING HOUSE.

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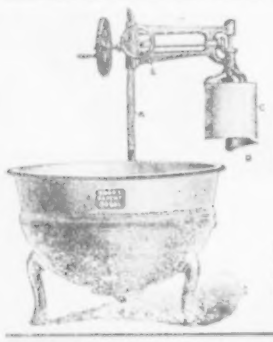
MANUFACTURERS OF



Soap Makers' and Butchers' Machinery,

462 Ellicott Street, Buffalo, New York, U. S. A.

Swing Foot Lever Soap Presses, Nos. 1 and 2. Combination Foot and Steam Power Soap Presses. Improved Soap Remelting Catchers, either with or without 8 Horse Power Engine attached. Seamless Steam Jacket Kettles. Steamed Jacketed Toilet Soap Kettle, with Agitator (three different styles). Steam Jacketed Rendering and Refining Kettles. Steam Jacketed Kettles for Confectioners.

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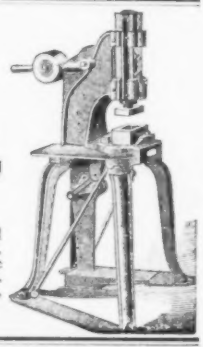

MENTION THIS ADVERTISEMENT.

Clean Your Boiler Tubes with Abrams Expansion Flue Brush. Write ST. LOUIS STEEL WIRE BRUSH CO. ST. LOUIS, MO., for Circular.

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CLASSIFIED INDEX OF ADVERTISERS.

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Herman Poole, New York, N. Y.
Valk & Murdoch Iron Works, Charleston, S. C.

Air Compressors.
M. C. Bullock, Mfg. Co., Chicago, Ill.
Ingersoll-Sergeant Rock D. Co., New York, N.Y.
Morris Machine & Iron Co., Dover, N. J.
Rand Drill Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

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Paul S. Reeves, Philadelphia, Pa.
Amer. Imp. Anti-Friction Metal Co., Mobile, Ala.
Electricon Metal Co., New York, N. Y.

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Edward Barrath & Co., Chicago, Ill.
Teague & Mayre, Newport News, Va.
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Gustaf Bottiger, Winston, N. C.
D. G. Zeigler, Charleston, S. C.
Charles H. Read, Richmond, Va.
Wilson & Huggins, Roanoke, Va.
Griswold & Nunan, Owensboro, Ky.
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Lockwood, Greene & Co., Boston, Mass.
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Toledo Cornice Works, Toledo, O.
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Champion Iron Co., Kenton, O.
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Fred. J. Meyers Mfg. Co., Covington, Ky.
T. H. Brooks & Co., Cleveland, O.
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Babbitt Metal. [See *Anti-Friction Metal.*]

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Haines, Jones & Cadbury Co., Philadelphia, Pa.

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Henry Popham & Son, East Newark, N. J.
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H. H. Mansfield, New York, N. Y.

Boiler Fronts and Fittings. [See *Boilers.*]
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Gates Bros. & Sharp, Corinth, W. Va.
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Lidgerwood Mfg. Co., New York, N. Y.
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National Cotton Gin Co., Boston, Mass.
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Smith, Saunders & Collins, Newton, N. C.
Heisler Electric Co., Philadelphia, Pa.

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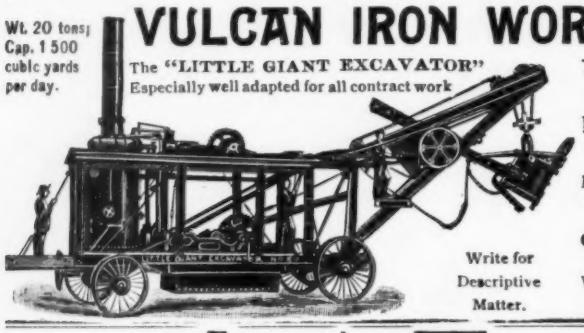

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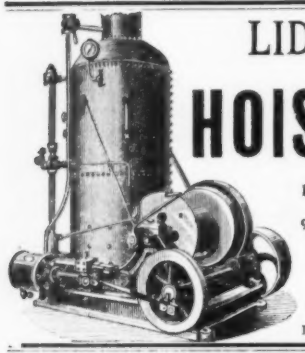

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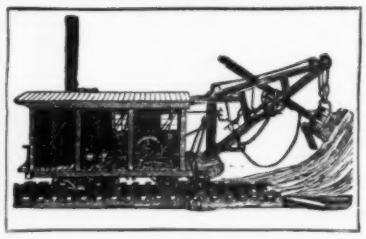

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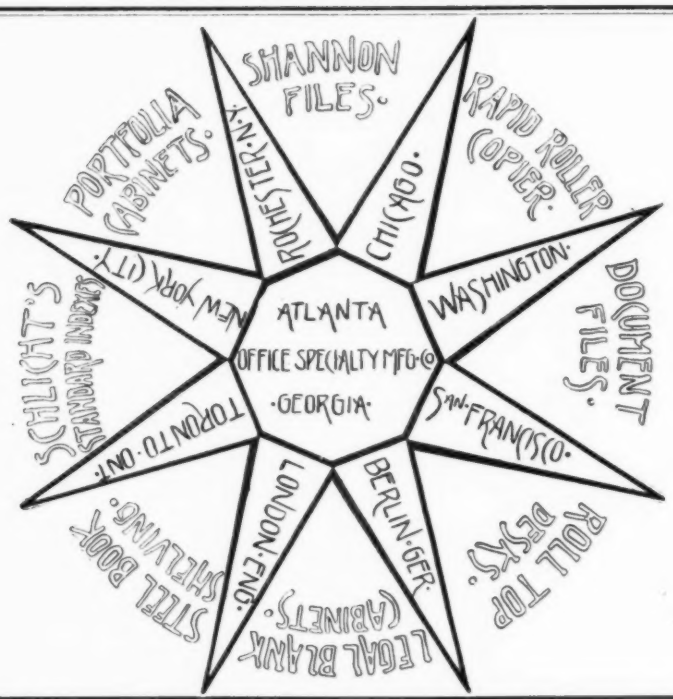

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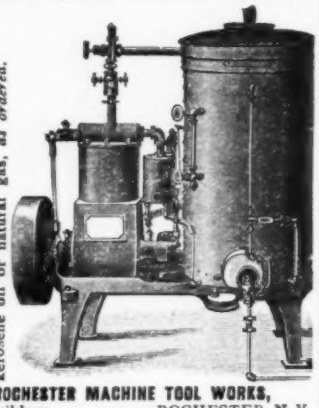

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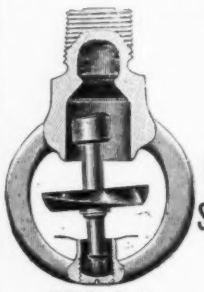

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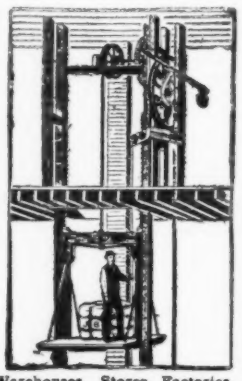

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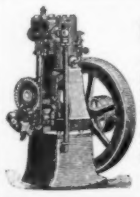

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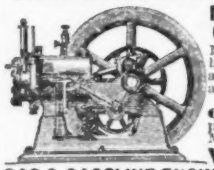

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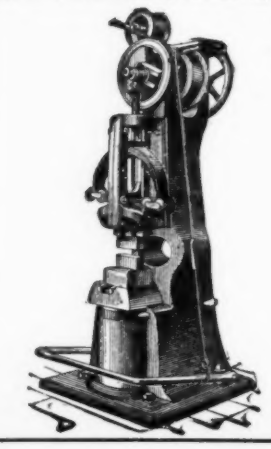

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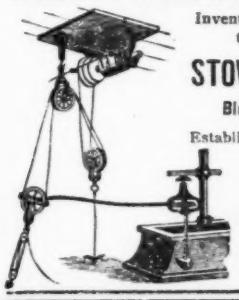

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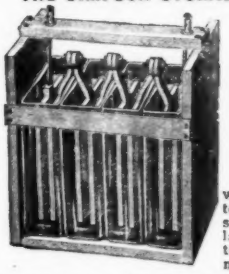

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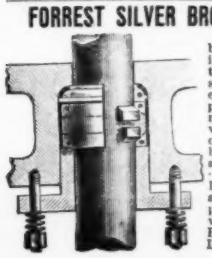

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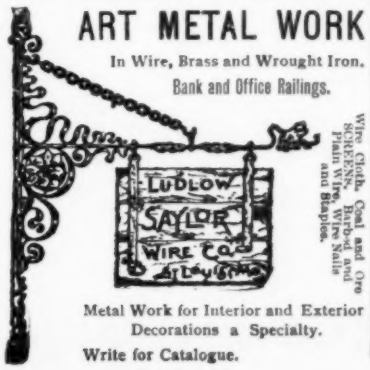

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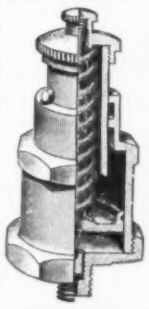

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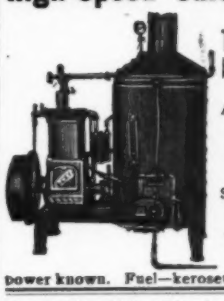

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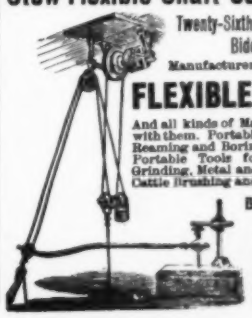

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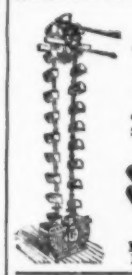

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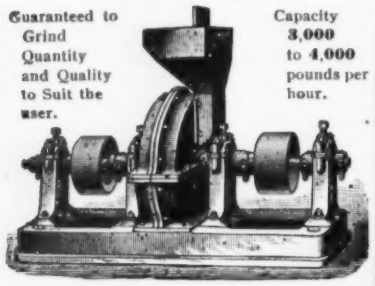

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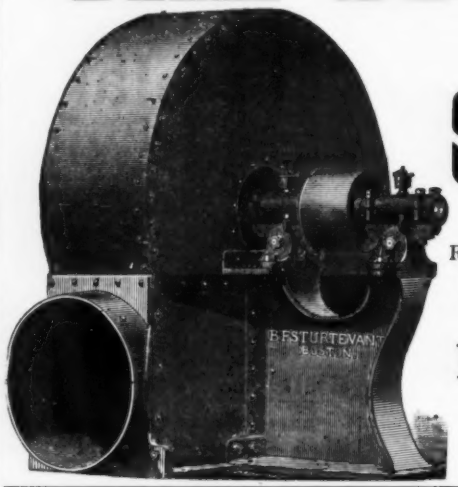

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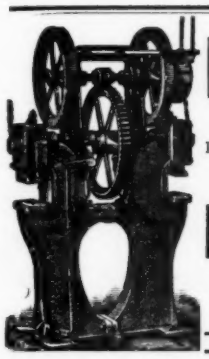

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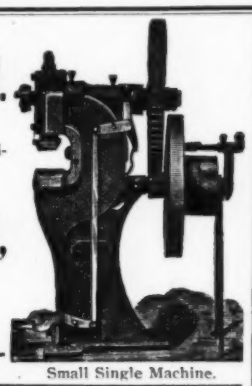

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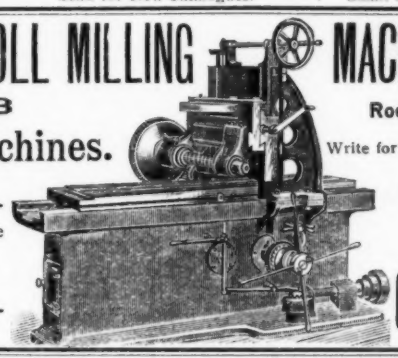

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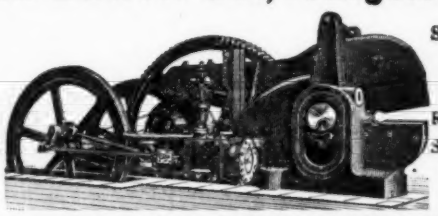

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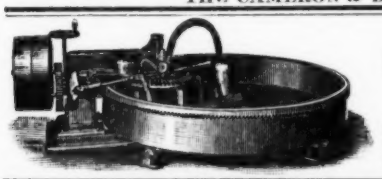

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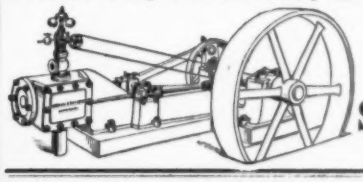

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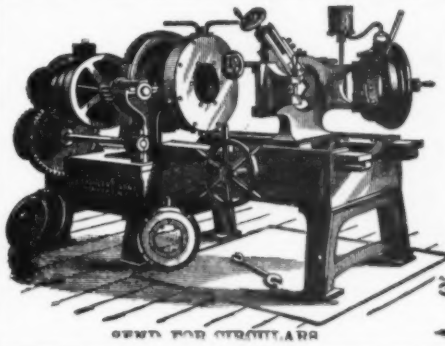

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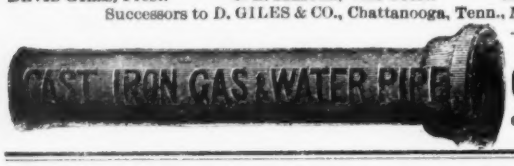

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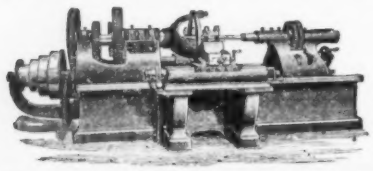

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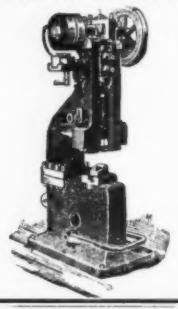

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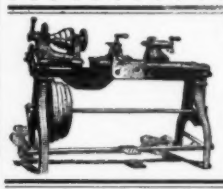

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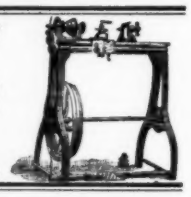

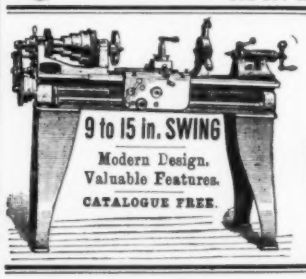

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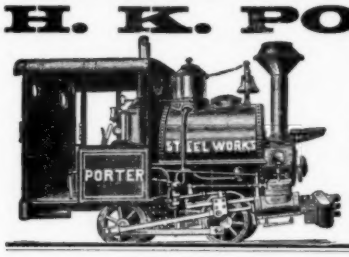

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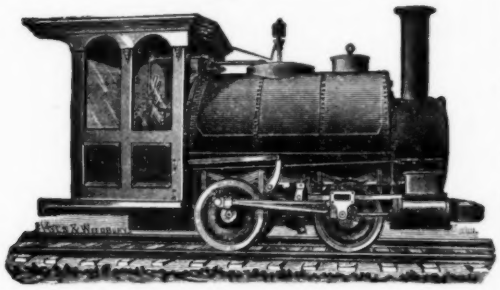

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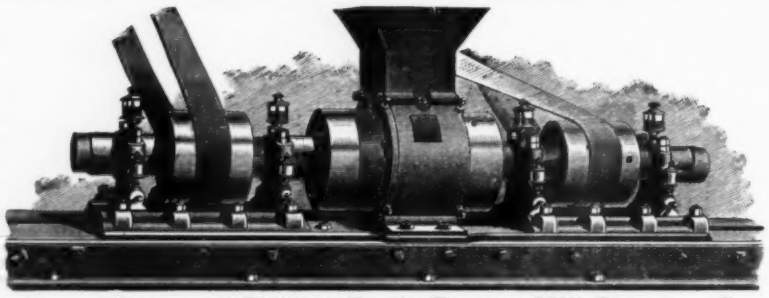
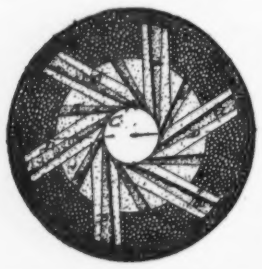


to twenty tons per hour, according to fineness. **Single machines** in daily operation grinding **20 tons per hour magnetic iron ore,** 100 barrels per hour cement, and 6 to 8 tons per hour phosphate rock to pass a 60-mesh sieve at a cost far below any known process. **Will not wear out.** Machines running daily for several years practically as good as new. Wearing parts renewed at slight cost.



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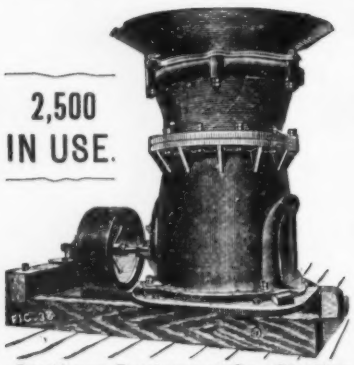

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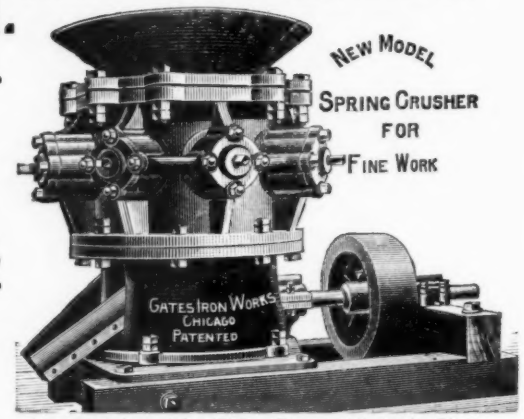

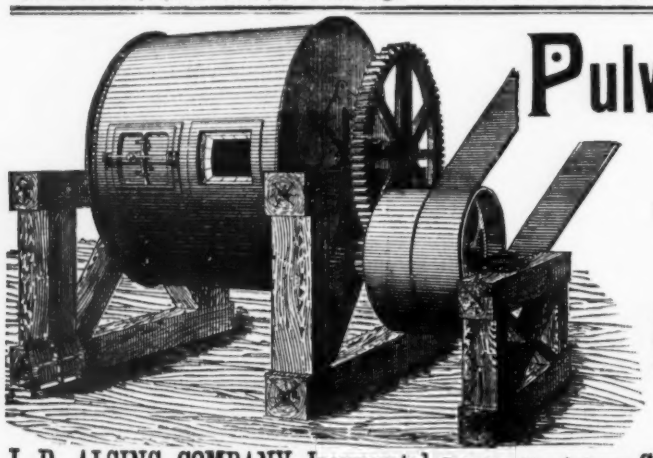

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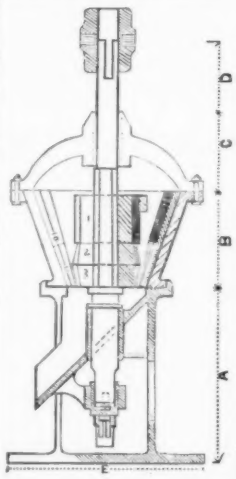

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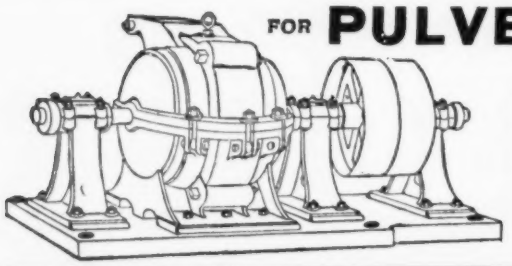

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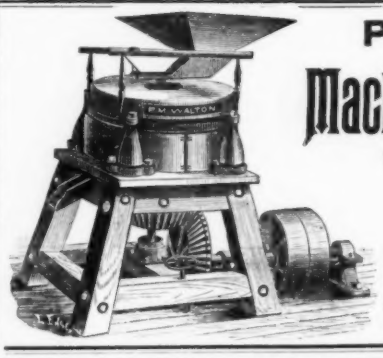

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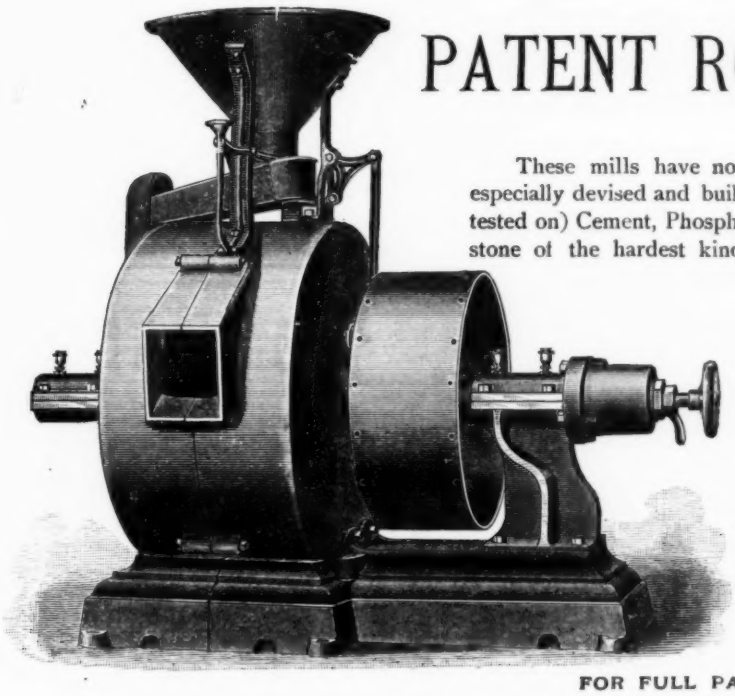

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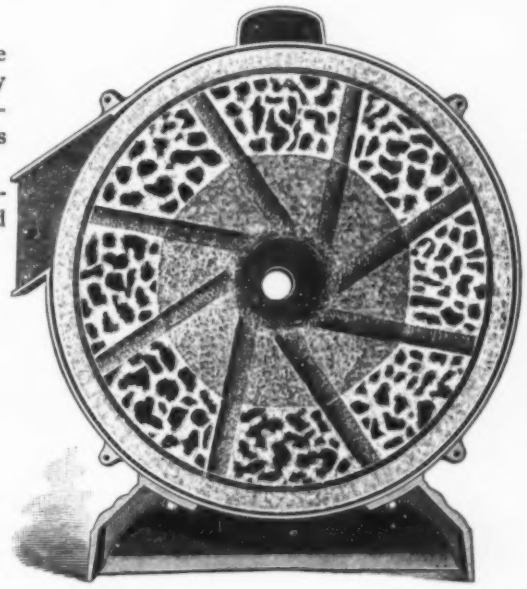

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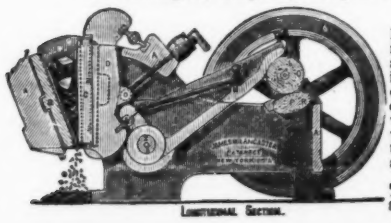

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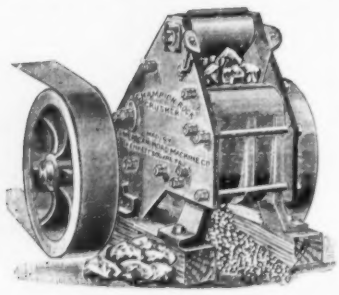

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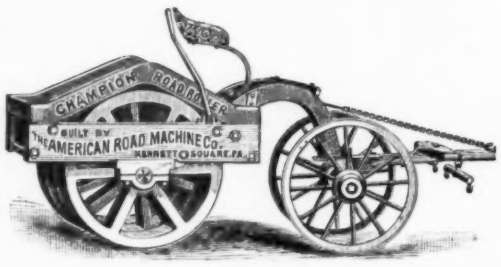

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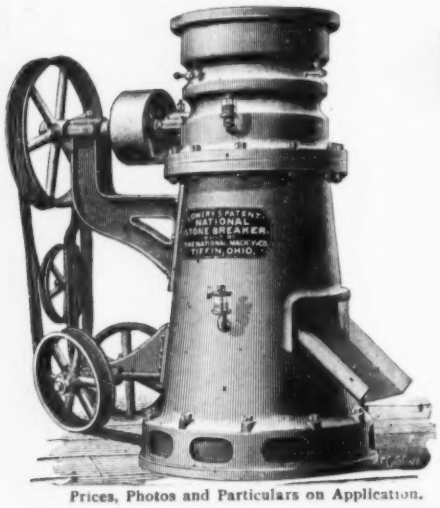

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Strong and Simple in Construction. Grit Cannot Enter.
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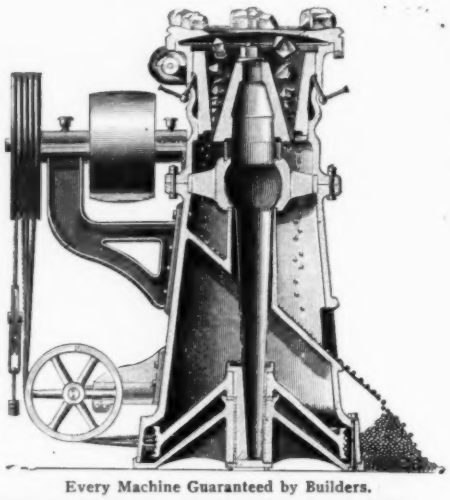

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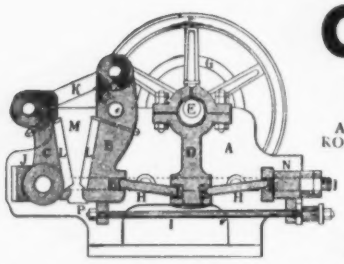

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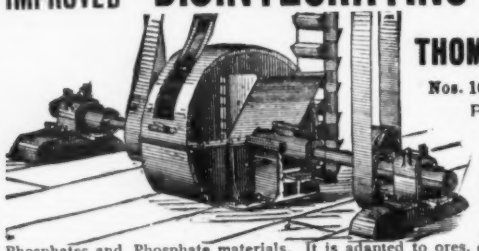

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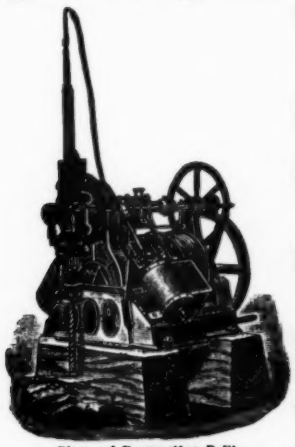

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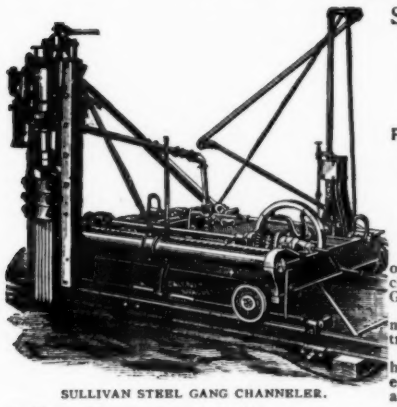

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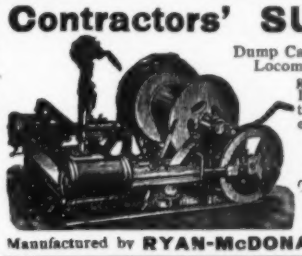

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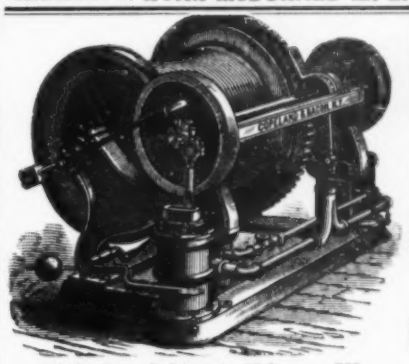

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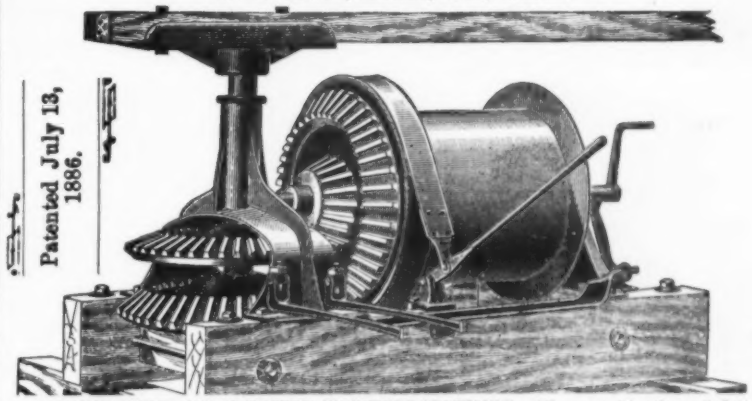

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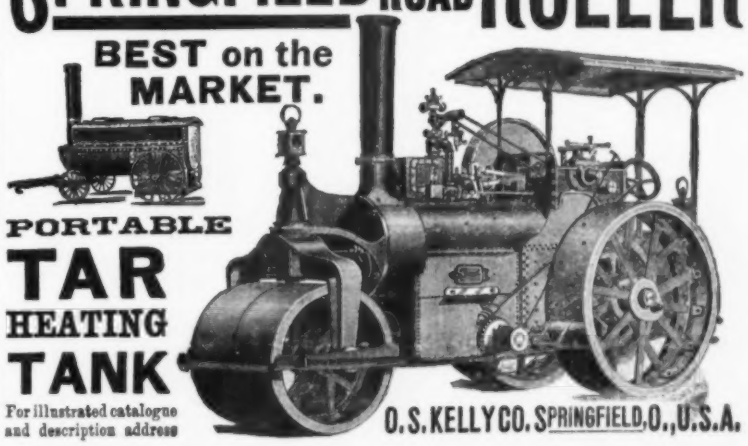

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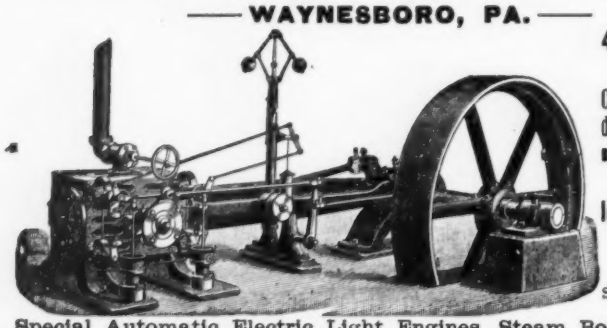

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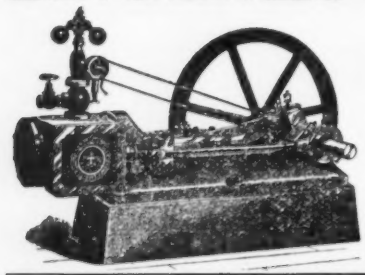

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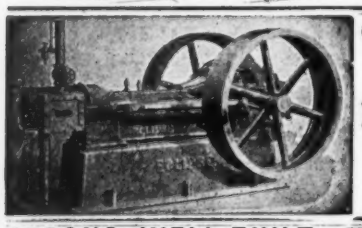

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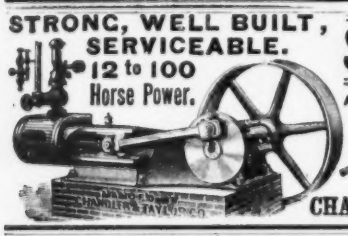

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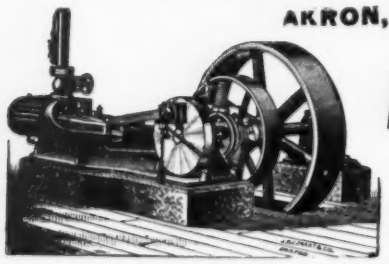

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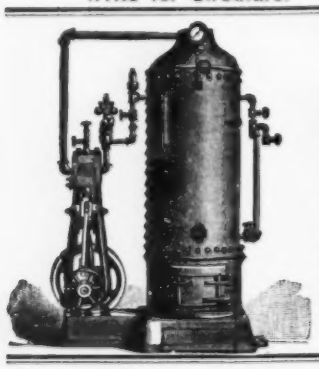

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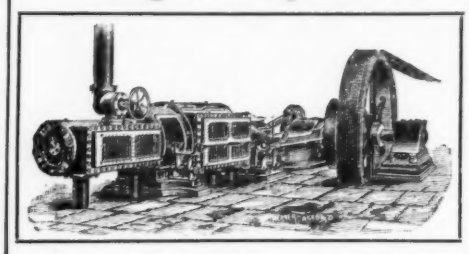

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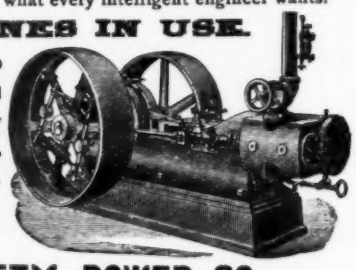

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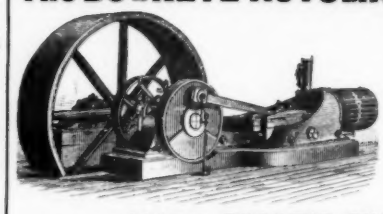

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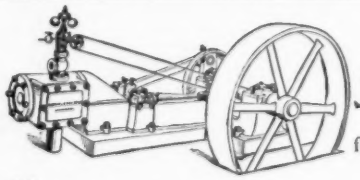

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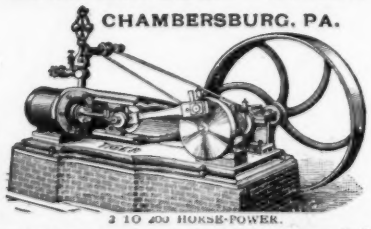

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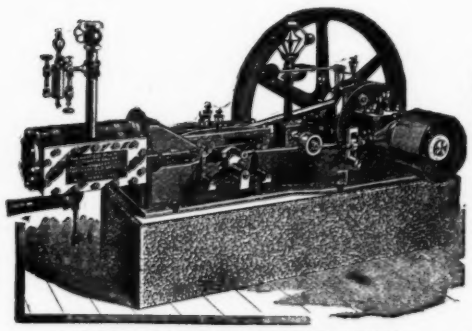

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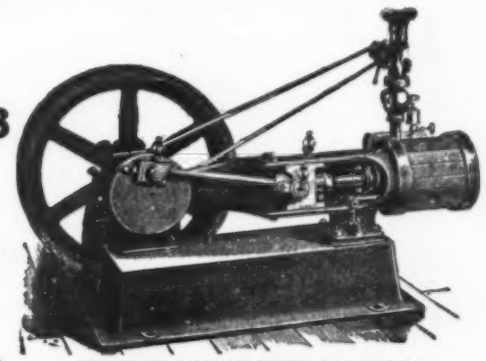

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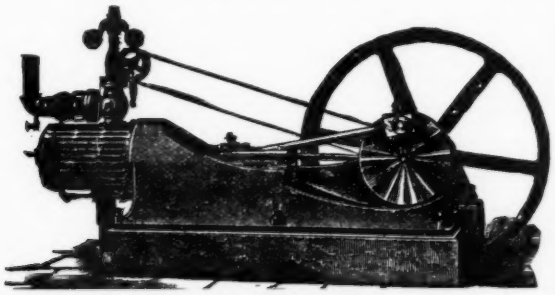

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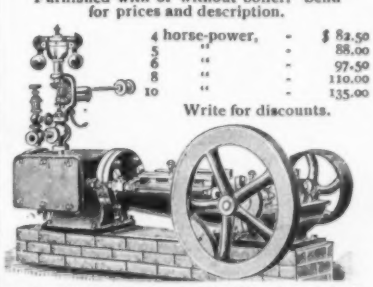

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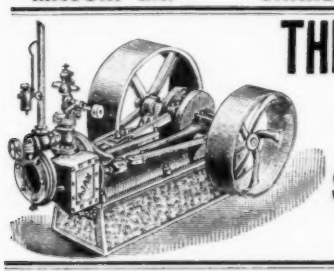

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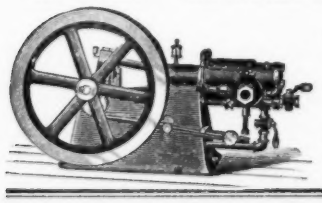

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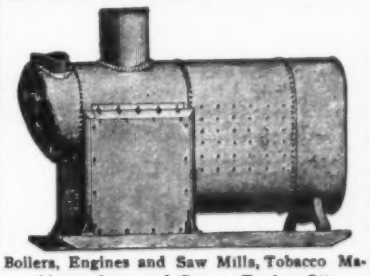

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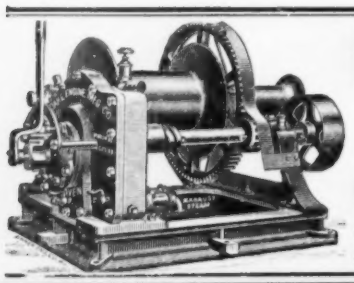

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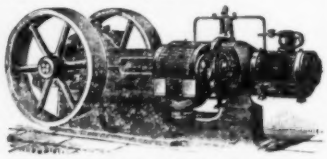

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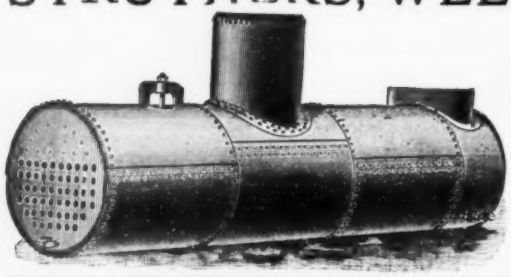

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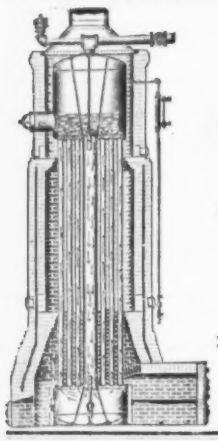

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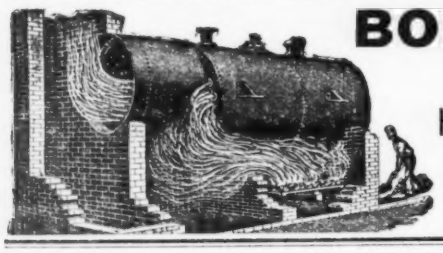

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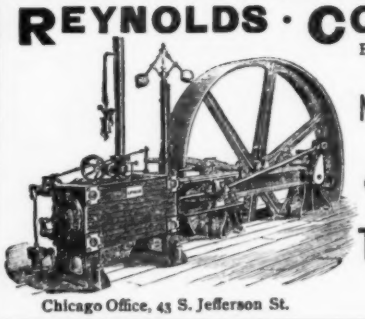

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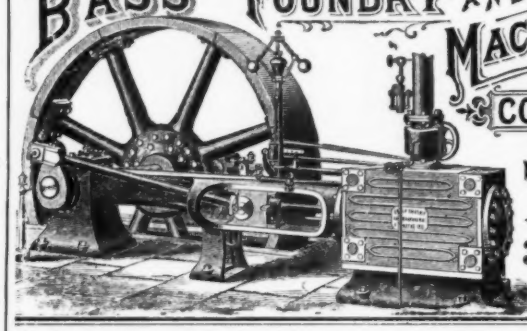

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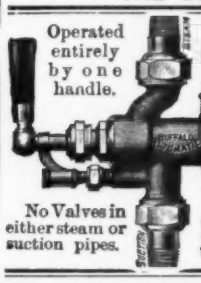

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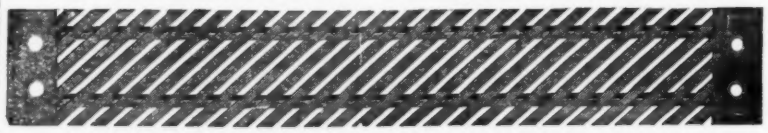

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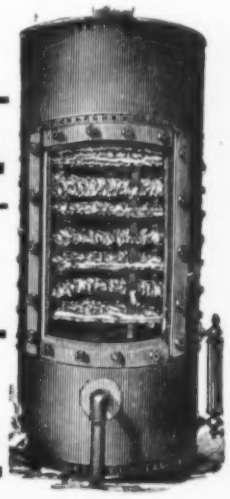

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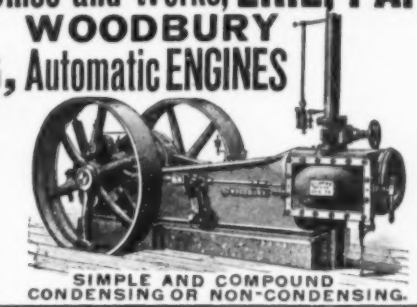

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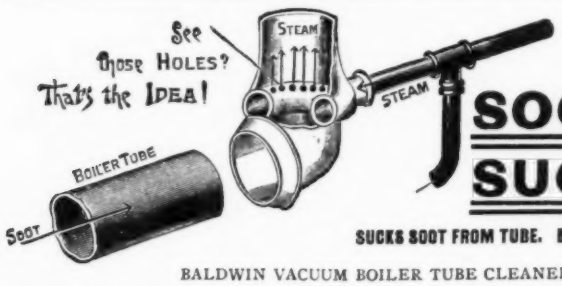

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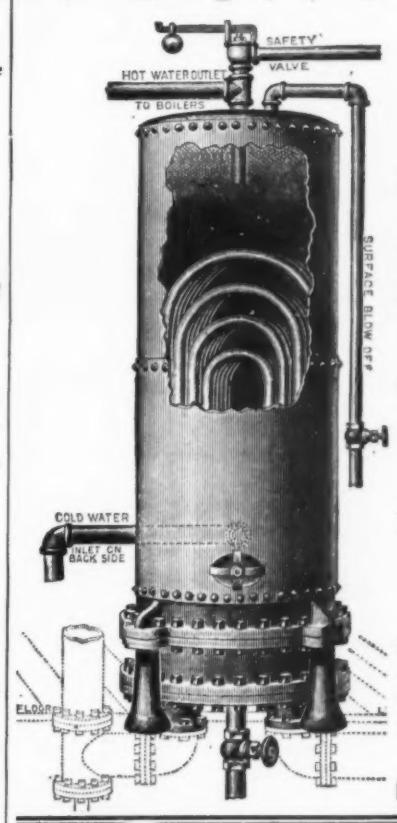

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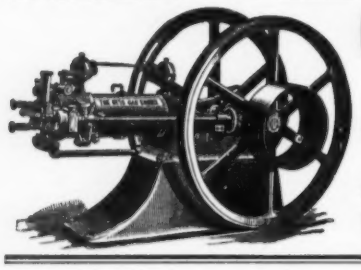

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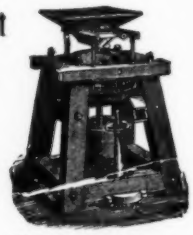

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Hop Cultivation in the South.

By B. W. Todd.

Overproduction, or rather an inability to market garden products, is one of the great obstacles to our farmers. This impediment is one that may be removed by the farmer himself—first, by raising in large quantities only such products as will stand long transportation or can be converted into a staple article.

In our town during this summer tomatoes, cabbage, etc., were almost given away or sold at prices that were ruinous to the farmer, while small fruits, such as strawberries, grapes and early apples, were at a premium and sold at remunerative prices. The lesson is obvious.

But there are other products that may be cultivated with success in this climate. The answer that the farmer invariably gives to the query, "Why do you not raise more grapes, more apples and small fruits?" is that it costs too much to get started, and we have not the means to start with, and therefore are obliged to raise what will bring us as quick a return as possible. The farmers are beginning, however, to grasp the possibilities that are before them, and year by year are planting more fruit trees and vines.

The feasibility of the culture of hops has often occurred to me. The climate of the highlands of the South seems admirably adapted to their growth, and wherever I have seen a vine growing in this section it has seemed very thrifty. The large and growing consumption of beer in this country would indicate that a good market exists, and at prices that would pay handsomely.

The method of cultivation adopted in England, and more particularly in Worcestershire and Herefordshire, localities most familiar to me, is this: The soil is first thoroughly prepared by deep cultivation to the depth of eighteen inches; the roots are then set out in rows about ten feet apart and at such distances in the rows as is deemed advisable, according to the qualities of the soil. One thousand roots to the acre is the usual quantity. These roots are generally set out in early spring. A stick three or four feet long is also placed at the root to support the vine during the first season. During the first year this vine must be cultivated and kept free from weeds; beyond this they need little attention until the next spring, when the soil is plowed back from the roots to the depth of four inches, the roots are cut back and pruned so as to prevent their throwing off too many shoots. When this is done one pole twelve to fifteen feet long is placed at the root and the roots begin to throw out shoots, which, as soon as long enough, are trained up the pole and tied with rushes or any grass that may be tough enough to answer the purpose. The bastard or gut vines, or "wires," as they are locally called, are pulled off and only two or three vines allowed to grow. Whenever the vines get loose from the poles they must be tied up, or the wind will batter them, until the tops of the poles are reached, then they will take care of themselves.

When the vines are well under growth the soil is gradually worked back to the roots, mixed with the fertilizer that should have been put on in the early spring, and finally plowed well up and a furrow or small ditch left in the middle of the row to prevent the rain from washing the roots. After the second year two poles longer than the first may be placed at the roots, as by this time they are strong and will stand a greater call on their strength, but the method of culture is the same. Hops, to insure a good crop, must be liberally fertilized and repay such treatment in a large degree.

As soon as the seed in the hop gets ripe it is time to be picked, which is generally done by women and children. Poles are pulled down, vines cut but left on the poles, and taken to the cribs or receptacles for hops, where they are picked off.

The hops are then taken to the kilns to be dried, which is done over a brisk coke fire. The hops are placed in a specially-built kiln over horse-hair blankets placed on slats at proper distances from the fire. As soon as the moisture begins to come out, or they begin to sweat, brimstone is thrown on the fire. This gives them the delicate yellow color and bleaches them; the firing is then resumed until they are perfectly dry.

They are then taken from the kiln and thrown in a large heap until ready to pack, which is done when a certain degree of moisture returns, which requires considerable skill to determine.

The hops are then firmly packed in sacks twelve inches in circumference and about eight feet long under good pressure, sewed up and branded with the producer's name, address, date and weight. The sack presents a solid appearance and weighs from 150 to 200 pounds. The crop is now ready for market and is sold by sample taken from the sack with a long knife used specially for this purpose.

When hops have been scarce and a good demand exists I have known the fine grades to fetch as high as $100 per 112 pounds; the average price, however, is $25 to $30 per 112 pounds, depending largely, like the cotton crop, on the season and the quantity produced.

An average yield is 500 pounds to the acre, according to season, but hops are so profitable to the farmer in England that he often devotes his attention to this crop to the detriment of others.

There seems no reason why hop cultivation should not be made highly successful and profitable in this section, where labor is cheap, the land rich and productive and an abundant supply of timber suitable for poles.

I hope that this article may be the means of inducing some of the more enterprising farmers to try an experiment in this line, which, with proper care, will, I doubt not, prove successful and add another industry and product to our already fruitful country.

Fruit Trade at Mobile.

The Norwegian steamship Sama, the first of the initial line of fruit steamers to the islands, arrived at Mobile on the 6th inst. from Boca del Tora with bananas. The vessel was only five days on the passage, and the fruit arrived in excellent condition. It was immediately loaded in freight cars, making up a train of twenty cars, which left the city over the Mobile & Ohio, arriving at Chicago on the night of the 8th inst. J. G. Gillette, the agent of the line, has a subsidy from Mobile merchants, and is quite gratified over the result. He will proceed to Boca del Tora and arrange for further shipments, which will arrive on prompt schedule time.

Fruit-Raising in Arkansas.

By J. A. Foote.

I was much pleased to note in your issue of September 23 an interesting communication on "Zinc in Arkansas," and feel that it is indeed high time the citizens of this favored region should make known to the world its many advantages. Too little has been said of the vast resources of this State—its minerals, timber and agricultural products. Having read with interest in a recent issue of the MANUFACTURERS' RECORD an article on "Peach-Growing in Georgia," I am prompted to tell your readers something of the great fruit region of Northwest Arkansas. Benton county is the northwest corner of the State. South of this lies Washington, and in these two counties the premium apples of the world are grown. At the American Pomological Society in Boston in 1887, at the display of the Horticultural Society at Riverside, Cal., in 1888, at the St. Louis Fair in 1890 and at the World's Fair in New Orleans in 1885, where there were 22,000 plates of apples on exhibition, our apples were awarded first prizes, and in nearly every instance the prize-winners were native seedlings. I copy the following from the Boston *Herald* concerning the exhibit there in 1887, and it is a fact that the best of these apples grew in Benton county:

> It comprises one of the finest displays of fruits ever seen in this section of the country. It is a revelation to New England horticulturists, and is receiving the attention it so justly merits. The collection is entirely the product of Arkansas, and consists chiefly in apples and pears. The display comprises sixty-six varieties of native seedlings, the largest number ever shown before in the United States. All of this fruit is sound and of delicious flavor. The specimens are marvelously large, and it seems almost incredible that such rich results are obtained without the employment of artificial aid. There are also shown seventy varieties of cultivated fruit which for size and appearance distances anything ever seen in this or any other Northern city and illustrates the wonderful adaptability of the soil and climate of Arkansas in bringing forth these delicacies of the market. No State in the Union, it would seem, can compete with her in this line, a fact that is rapidly becoming known through the enterprise of those who wish to see the State's vast fields settled upon and under the hand of cultivation.

There has never been an entire failure of the crop in this section, and the present one, which is now being marketed, is bringing good prices and is putting into the hands of the growers a considerable amount of money. Good shipping fruit is selling readily at seventy-five to ninety cents per bushel, and from the several shipping points throughout the county carloads are being sent away every day, most of it going to Northern and Western cities. Later, when the weather is cool, Texas furnishes a splendid market.

Fruit keeps well in this climate, and where growers are prepared to store it they realize very fine prices. There is a demand for all the fruit grown. That which will not bear shipping is sold to the evaporators, cider, vinegar and jelly works.

Orchards are very profitable here, and thousands of acres are being annually set in trees. The growth of the trees when properly cared for is rapid and vigorous. Choice varieties of two-year-old trees can be bought from the nurseries as low as five cents a tree. I doubt if there is any section where the yield of fruit is so large for the attention given as here. In the season of 1890, when apples sold at forty to fifty cents per bushel, the crop brought into Benton county over $300,000. This season the crop is not so large, owing to the late wet spring, but the good prices prevailing will make up for the shortage in the crop. This country is not only the home of the apple, but all kinds of fruits do extraordinarily well, and the climate is remarkably healthful. A good portion of Benton county is on a plateau 1,600 feet above sea level. The county is one of the largest in the State, covering an area of 840 square miles, and embraces some of the finest farming lands in the State. No cotton is grown in Benton and very little in Washington, but both these counties produce annually a considerable surplus of corn and wheat of the finest quality. There is in Benton county 100,000 acres of government land subject to homestead entry. It lies principally among the hills and along the water-courses in the eastern side of the county. Nearly all of it is good fruit land, and is also well adapted to the raising of sheep and goats. The county has considerable mineral wealth. Lead and coal are found in several places. The best quality of limestone and a variety of building stone exist in inexhaustible quantities. There are many fine springs and unlimited water-power. The principal towns are Beatonville and Rogers, each claiming a population of 2,500. The first house was built in Rogers in 1881, when the St. Louis & San Francisco Railroad was being completed through here. The country is prosperous, progressive and healthful, and offers a splendid field for capital and labor.

Rogers, Ark.

The Westwego Grain Elevator.

An excursion to the new grain elevators at Westwego and Southport was tendered to a large party of prominent business men in New Orleans on Saturday last by Captain Sweeney, of the tugboat F. T. Nicholls. The steamer left the head of Canal street at 3 o'clock P. M. with a large party on board, and the trip up the river afforded an excellent view of the shipping of the port. Westwego, six miles above Canal street on the right bank, was reached after a short run, and the party disembarked to visit the new elevator which has just been leased by Hall & Robinson, of Kansas City. The elevator has a capacity of 350,000 bushels and is built on the most approved plan. Work is actively progressing on the switches from the main track of the Texas & Pacific Railway about half a mile in the rear, and piling is being driven for a long wharf to accommodate steamers in loading. After inspecting the Westwego plant the trip was continued up the river to Southport, where a new elevator of double the capacity is being built in the rear of the old one, upon which the river is gradually encroaching. When the new elevator is completed the grain capacity of Southport will be 500,000 bushels Among the officers of the Texas & Pacific

Railroad present were Gaston Mesller, general passenger agent; L. S. Thorne, general superintendent; N. G. Pearsall, division superintendent; Oliver Willis, secretary to general superintendent, and B. F. Watson, chief engineer.

Iron Ore Product of the South in 1891.

We have received from Mr. John Birkinbine a copy of his report on the production of iron ores in 1891, prepared for the volume of "Mineral Resources" of the United States Geological Survey. The portions of Mr. Birkinbine's report which relate to the South are embraced in the following extracts:

IRON ORE PRODUCT OF THE UNITED STATES.

States.	Long tons. 1890.	Long tons. 1891.
Michigan	7,141,686	6,127,661
Alabama	1,897,815	1,986,830
Pennsylvania	1,361,622	1,272,928
New York	1,252,393	1,017,246
Wisconsin	948,965	889,481
Minnesota	891,919	948,168
Virginia	843,583	658,916
New Jersey	495,868	525,612
Tennessee	465,695	543,923
Georgia	244,088	289,755
Missouri	181,600	105,919
Ohio	169,088	164,487
Colorado	114,775	116,942
Montana		12,539
Oregon	81,632	29,018
New Mexico		39,776
Utah		12,066
Kentucky	77,588	65,079
Maryland	38,067	37,579
Massachusetts	32,634	47,392
Connecticut	26,068	30,923
West Virginia	25,116	6,266
North Carolina	22,873	19,210
Texas	22,000	51,000
Maine	2,300	.....
Idaho	.....	400

Alabama, with a total of 1,986,830 long tons, still continues as the second State in order of iron ore production, its percentage of the total output being 13.62, an increase of 89,015 tons, or 4.69 per cent., over the 1890 output of 1,897,815 long tons. The larger portion of the State's product, 1,524,783 tons, or 76.74 per cent., was red hematite, in which class it occupied second place with 16.35 per cent. of the total, and the balance, 462,047 long tons, or 23.26 per cent., was brown hematite, in which class it occupied second place with 16.76 per cent. of the country's product.

The red hematites of Alabama follow a general southwest and northeast direction, entering the northeastern corner of the State, proceeding southwest until the northern central portion of the State is reached, where in the vicinity of Birmingham they turn, forming, as it were, a fold, and it is in this section of the State that the largest mines are found. The brown hematites tend in the same general direction as the red hematites, but are found to the southeast, entering the State in Cherokee county from Georgia, passing through Calhoun, Talladega, Shelby and Bibb counties, then making a curve to the northward, and at Russellville, in Franklin county, large quantities are mined. There is also some brown hematite mined in Jefferson county, and from an area of two acres at the Tannehill mine 115,563 tons of ore have been taken out, and 25,000 tons are estimated as still remaining ready for extraction. It is probable, owing to the improvement in quality of metal produced, which follows the mixture of red and brown hematites, that the demand for the latter class of ore will increase.

No statistics are obtainable which show the production of iron ore in Alabama for a series of years, but the development of this industry may be closely approximated by estimating the production of iron ore from the amounts of pig iron made, for although there are interchanges of ore between Alabama and adjoining States, it may be considered as producing about as much ore as is used in the State.

The following table has been prepared, giving the estimated amounts of iron ore mined in Alabama from 1880 to 1891, inclusive, those marked * being taken from the reports of the United States Geological Survey; those marked † are taken from the census:

PRODUCTION OF ALABAMA IRON ORE MINES.

Years.	Production. Long tons.	Years.	Production. Long tons.
1880†	171,139	1886	650,000
1881	220,000	1887	675,000
1882	250,000	1888	1,000,000
1883	385,000	1889†	1,570,319
1884	420,000	1890*	1,897,815
1885	505,000	1891*	1,986,830

Actual returns were only obtained for the years 1880, 1889, 1890 and 1891, but the estimates for other years are based on the most reliable data, and the table may be considered as an evidence of the influence of the rapid local development of the pig iron industry. There were six mining companies in Alabama, each of which produced over 100,000 tons in 1891, and together they contributed the larger portion of the total output for the State. Some of these companies operated several mines.

Virginia stands sixth as an iron ore producing State, with an output of 658,916 long tons, or 4.52 per cent. of the total for the United States, an increase over the 1890 output of 115,333 long tons, or 21.24 per cent. Practically all of this ore, viz., 99.15 per cent., was of the brown hematite variety, the amount being 653,342 long tons, an increase of 130,434 long tons, or 24.94 per cent., over the 1890 output. Virginia thus taking first rank of all the States as a producer of this class of ore, with 23.69 per cent. of the country's total. The amount of red hematite and magnetite mined was small, the combined total being less than 1 per cent. of the iron ore output of the State. But both classes showed a marked decline, the first mentioned of 12,938 long tons, or 79.81 per cent., from the 1890 output of 16,212 tons, and the latter of 2,163 long tons, or 48.47 per cent., from 4,463 long tons won in 1890.

The brown hematite deposits, which extend in a general northeast and southwest line through the State, along the Shenandoah valley and the Cripple creek, form the chief base of supplies for Virginia blast furnaces, although some ores are brought in from North Carolina and possibly from Tennessee. While the local ores are not high in iron, they are easily smelted and make good foundry iron, but are unsuited for the manufacture of Bessemer pig, owing to their chemical composition. The small amount of red hematite is found in the vicinity of the James river, and the magnetite in Pittsylvania county.

Within the last two years the increased demand for iron ores has caused the mining of large amounts of brown hematite ores locally known as "gossan" ores, which are found in the southwestern portion of the State, running in a northeastward direction from Floyd through Carroll county and into Grayson county. These ores are formed by the oxidation of "mundic," a term used to include both the pyrite and pyrrhotite. Mr. Moxham states that this cap or "iron hat" is from twelve to forty feet wide at the surface, and forty to seventy-five feet at the bottom at its junction with the "mundic," from forty to 175 feet below the surface, according to the height of the hills it traverses, the higher the hills the greater being the depth of the gossan ores, while the "mundic" as a rule remains in place. It has little or no cover, and its exposures vary in character. At some points large bodies of gossan ore extending over many acres present themselves. The ore is generally used as a mixture with the hard brown ores, and to its red short tendency is credited the additional strength of the iron produced.

The blast furnace industry of Virginia is apparently in advance of the present iron ore developments, and the general activity of the smelting plants will demand either the discovery and exploitation of other deposits of iron ore, or a partial dependence upon the ores from adjacent States.

Mr. Moxham gives the following analyses of the "gossan" ore in its natural condition, and also some of the "mundic" or undecomposed sulphuret:

ANALYSES OF "GOSSAN" AND "MUNDIC" ORES.

	Gossan.	Mundic.
Iron	41.28	53.15
Silica	9.74	2.99
Sulphur	1.13	34.06
Copper	0.293	0.866
Phosphorus	0.064	no trace
Manganese	0.306	0.366

Other analyses show larger percentages of silica.

Tennessee produced 396,883 long tons of red hematite iron ore in 1891, as against 278,076 tons won in 1890, an advance of 118,807 long tons, or 42.72 per cent., and also 147,040 long tons of brown hematite ore, while in 1890 187,619 long tons of this class were mined in the State, the balance in favor of 1890 being 40,579 long tons, or 21.63 per cent. A comparison between the total outputs of the States shows that in 1891 543,923 long tons were produced, while in 1890 465,695 tons were mined, a difference of 78,228 long tons, or 16.80 per cent. The State occupied eighth position, with 3.73 per cent. of the total iron ore for the country.

The red hematites are found in the eastern portion of the State, running in a general southwest and northeast direction along the valley of the Tennessee river, and there is also a series of brown hematite beds following the same trend, while in the central and western portion of the State, in the valleys of both the Tennessee and Cumberland rivers, are belts of brown hematite continuing southward into Alabama.

Southern Iron Notes.

At the recent meeting of the Tennessee Coal, Iron & Railroad Co. it was decided to place the properties in the hands of a board of control about November 1. The board is to consist of Nat Baxter, A. M. Shook, J. J. Hillman, J. H. Aldrich and H. F. DeBardeleben. The company will consolidate all its Alabama offices and locate them in Birmingham, making H. F. DeBardeleben general financial manager; David Roberts, manager in charge of selling iron; J. H. Aldrich, manager for selling coal, and G. B. McCormack, superintendent of mines.

THE Florence (Ala.) Cotton & Iron Co. will put the Philadelphia furnace in blast upon the completion of the relining and general remodeling which it is now engaged upon.

THE Unaka Iron Co. has nearly completed its washing plant and new cable road at its mines at Unicoi City, Tenn., and will commence shipments of ore in a short time.

THE Dora furnace at Pulaski, Va., is averaging a daily output of 130 tons of iron. Additional beds are being built outside the regular casthouse.

THE Rich Patch Iron Co., of Staunton, Va., has built a new dam sixty feet wide which suffices to operate its washer. The company's property, which embraces 9,000 acres, has recently been further explored and several rich and abundant ore veins have been discovered.

Lidgerwood Cableway and the Austin Dam.

The *Scientific American* of September 24, in connection with an interesting article on the subject, prints three illustrations of the famous Austin dam, now being built across the Colorado river at Austin, the capital of the State of Texas, which is to furnish the city with water works and electric lights and its manufacturing enterprises with cheap water-power. This dam is notable in that the volume of water which will pass over it is estimated at 250,000 cubic feet per second, which is nearly equal to the volume at Niagara Falls, to wit, 275,000 cubic feet per second; hence the great interest attached to its construction.

A prominent feature of the illustrations is the Lidgerwood cableway, which is shown as used in the building of the dam. This cableway, which is the invention of and was erected by the Lidgerwood Manufacturing Co., 96 Liberty street, New York, is the longest hoisting and conveying apparatus in the world. It is 1,350 feet span and has a capacity for handling 6½ tons of stone at a speed of 600 to 800 feet per minute, hoisting and conveying and delivering the loads anywhere along the top of the dam as may be required.

The Washington-Baltimore Electric Railway.

For several years past a project has been under consideration for opening a boulevard and electric railway between Baltimore and Washington. During the last session of Congress right of way into the District was given, and since that time the preliminary surveys have been made. The corporation was chartered under the laws of Maryland as the Baltimore & Washington Turnpike & Tramway Co., having a capital stock of $150,000 in shares of $20 each, and authority to increase the capitalization to $300,000. The incorporators were Charles H. Stanley, Daniel Ammen, Benjamin F. Beall, Lewis Ford, Charles F. Shaffer, Charles B. Calvert, C. F. Fleister, George W. Kellogg, Edward Phelps, Harry C. Frost, M. W. Chollos, Robert Ober, Ellery Cohn, S. Gambrill and James Rittenhouse, and Gen. John Gill and W. H. Baldwin, of Baltimore city.

The company is empowered to make a turnpike road sixty feet or more in width, of which forty feet are to be of stone, gravel or other hard substance. An additional width of forty feet is also allowed for the tramway.

The electric road will be constructed with double tracks and will be substantially ballasted with stone so as to permit running trains at the rate of sixty miles an hour. The Washington terminus will be on Fourth street N. E. at a point where Rhode Island avenue, if extended, would intersect it. From this point the road will run along the avenue to the point of intersection with the northeast boundary line of the District of Columbia. The entrance to Baltimore has not yet been determined, but will likely be along the line of the old Washington turnpike, crossing the upper portion of Spring Gardens and Ostend and Ridgely streets.

This, when completed, will be the greatest enterprise yet projected in electric roads. The total length will be a little over fifty miles, and it is intended to make this in forty minutes. Besides the advantages of rapid transit between the two cities it will help build up suburban towns along its line. Many wealthy men of both Washington and Baltimore are interested, and all needed capital has been subscribed. The preliminary work is now being done at the Washington end, and during the coming month a corps of engineers will be put on to make the final survey and locate the line and grade.

Long-Distance Electric Transmission.

In a recent report made by Professor Weber, of Zurich, on the results obtained in long-distance electric transmission from Lauffen to Frankfort, 108 miles, it is stated that the actual and necessary loss of energy during the process of transforming a current of between 200 and 300 horse-power into one of small volume and high intensity, transmitting this current a distance of 108 miles over naked copper wire hung upon ordinary telegraph poles by oil and porcelain insulators, and retransforming it to a current of ordinary pressure, was only from 18 to 20 per cent., leaving from 80 to 82 per cent. of the generated current available for motive and lighting purposes.

COAL AND COKE.

The Spanish-American Coal Trade.

For some time past American coal producers and shippers have been making more or less of an effort to secure the Spanish-American coal trade, which thus far is practically controlled by Great Britain. While American exports to these countries have increased largely within the past few years, the total consumption in most cases has increased in nearly the same ratio, therefore the exports from this country have little more than held their own against British shippers.

For this there are two reasons. One, and the most important, being that American shippers do not carry large stocks or keep an agent at the principal points of consumption, whose duty it should be to endeavor to introduce the coal and overcome the natural prejudice against it by those not familiar with it. Another reason is that as a rule the coal is not as clean as British coal, and therefore neither looks so well nor gives such satisfactory results. These matters could readily be overcome by any company organized especially for this export trade and with a view of finally controlling at least a part of it, but to individual shippers, sending a cargo to one port or another as an experiment, the lack of a local agent compels a sale either to speculators or to others who have little interest in building up a trade and care only for the immediate returns from their venture.

The English recognized this need long ago and formed a company for the purpose of handling the Spanish-American coal trade, and in this they have been eminently successful. What is needed in this country is a similar company with sufficient capital and energy, and after a time there is little doubt but that they could secure the larger share of the trade.

The coal consumption of Spanish-America (that is, the South American republics and West India islands) amounts to about 3,500,000 tons per annum. Of this Great Britain supplies a little over 3,000,000 tons, and the United States in 1889 furnished about 300,000 tons, one-tenth of the amount furnished by England and but one-twelfth of the total consumption. The value of British coal exported to these countries in 1889 was $8,500,000, while that of American coal $870,000. In this same year the total value of American coal exported to all countries was $6,690,479, nearly $2,000,000 less than English exports to Spanish-American ports. The total English export of coal to all countries during this year was $71,929,212; therefore the Spanish-American trade represented 11.8 per cent. of the total value of British and 13 per cent. of American exports.

In the Argentine Republic there has been a marked increase in the consumption of American coal. In 1888 the total imports there were 367,178 tons—350,000 from England and 7,096 from the United States, or 95 and 2 per cent., respectively. In 1889 the imports were 723,359 tons—650,000 from England and 54,740 from the United States, or 89 and 7.5 per cent., respectively, an increase of 771 per cent. in American shipments, against 206 per cent. in those from Great Britain. This shows at least an effort to place American coal, but the disparity between the shipments of the two countries is far too great.

The value of coal in the republics during 1889 was as follows: Argentine Republic $8.00 to $15.00, Brazil $8.50 to $16.00, British Guina $5.50 to $8.00, Chili $7.00 to $12.00, Ecuador $18.00, Panama $14.00, Uurguay $12.00 to $13.00, Venezuela $7.00 to $9.00, Antigua $7.00, Barbadoes $8.00 to $9.00, Bermuda $6.00 to $8.00, Jamaica $5.00 to $7.00, Trinidad $5.00 to $7.50, Martinique $8.00 to $9.00, Haiti $9.00 to $12.00, Cuba $4.00 to $9.00, the variation in price depending both upon the supply and the quality. The freights from American ports to Cuba vary from $2.00 to $2.50 per ton, and to other ports go as high as $5.00 per ton, in few cases exceeding this. With coal at $3.00 or $3.50 at the shipping port, this leaves a margin of profit well worthy of consideration, but to carry on the business successfully needs more enterprise than has yet been displayed.

The New Orleans Coal Wharf.

Within a few days the New Orleans & Northeastern Railroad will open at New Orleans a large coaling wharf which has been under construction for some time and is now nearly completed. This is the outcome of an effort on the part of some officers of the Mary Lee Coal Co., of Birmingham, Ala., to make provision in New Orleans for handling Alabama coal. The plan has been entered into by the Tennessee Coal & Iron Co. and other large coal mining companies in the State, and it is intended that this wharf shall serve as a general shipping point for export and domestic coal in that city.

The wharf is 600 feet long and built solidly, so as to avoid danger from the Mississippi river. At the centre is an engine-house and the necessary machinery for driving the three conveyors which will be used in loading vessels. These conveyors can all be used at one time in loading one or more vessels, and have a combined capacity of 4,000 tons per day. They are fed from a large bin, on top of which the coal train is run to empty its load. By this means a large stock of coal can be kept on hand. The Queen & Crescent Railroad system has entered heartily in the plan, and 500 drop-bottom cars have recently been built for the work between Birmingham and New Orleans.

In connection with this coal wharf a company consisting largely of the people interested in it and including J. A. Montgomery and P. B. Clarke, of Birmingham; Col. William Anderson, of Chicago, and Harvey T. D. Wilson, of Houston, Texas, has been organized to carry on an export trade in this coal between New Orleans and Mexican ports. A fleet of whalebacks will be employed for this purpose, and one is now nearly completed. These barges will have a new and important feature in a conveyor inside the barge to equally distribute the coal in loading and to carry it to the main conveyor in unloading. This main conveyor will be so arranged that when desirable the barge can run alongside of any vessel, and by running the conveyor over her side and placing proper chutes the coal can be delivered rapidly and with little expenditure of labor.

The fleet at first will consist of three barges, but within six months there will be ten in service. A return cargo of onyx, mahogany and other Mexican products will be brought to New Orleans. It is intended to load some coal at Mobile for delivery at Texas points, and later on the Central American and Cuban markets will be tried.

Opening a Valuable Coal Property.

The Louisville & Nashville Railroad has decided to build an extension of the Cumberland Valley division, in Southeastern Kentucky, from a point near Pineville up Clear creek a distance of twelve miles, passing through the Log Mountain coal and timber district. The location of the road has been completed and advertisements for bids on the construction will be published shortly.

The Log Mountain district comprises over 30,000 acres, all owned by F. A. Hull, Danbury, Conn., and Thomas Cairns, H. P. Wyman and Dwight Cutler, of Grand Haven, Mich. These gentlemen have organized the Log Mountain Coal, Coke & Timber Co. with $2,000,000 capital, with the main office at Pineville. This district is considered one of the richest coal territories in the South in point of quality and quantity. Besides this there are some 500,000,000 feet of hardwood timber on the mountain sides. The new road will reach one of the thickest veins of cannel coal yet discovered and several superior veins of coking coal. A very active development is expected. The company intends to lease tracts to operators.

Cumberland Coal Shipments.

The shipments of coal from the Cumberland region for the week ended October 8 and for the year to that date have been as follows:

Companies.	Week. Tons.	Year. Tons.
Borden Mining Co.	4,966.06	186,111.12
Consolidation Coal Co.	21,737.19	198,758.08
Union Mine	3,832.12	128,318.12
George's Creek Coal & Iron Co.	6,591.11	222,864.10
Swanton Mining Co.	114.00	5,162.00
Potomac Coal Co.	2,430.19	109,085.02
Franklin Cons. Coal Co.	2,286.07	81,413.19
Piedmont Cumb. Coal Co.	624.07	7,317.00
Barton & George's Creek Valley Coal Co.	3,448.19	153,462.19
Big Vein Coal Co.	1,723.06	50,555.01
Anthony Mining Co.	251.18	7,263.03
W. Va. C. & P. (Elk Garden Mines)	6,286.14	275,242.03
Atlantic & George's Cr'k Coal Co.	272.03	32,924.11
Davis Coal & Coke Co.	1,556.00	83,623.00
Thomas Mine	3,094.10	82,934.11
Davis and Elkin Mine	2,376.11	56,694.08
Cumb. Coal Co. (Douglas Mine)	1,242.00	50,875.00
Elk Garden Big Vein Mining Co.	520.05	24,968.00
Hampshire Mine	885.17	14,488.00
Big Vein Coal Co.	65.02	2,936.19
American Coal Co.	7,991.08	295,203.10
Maryland Coal Co.	6,530.18	208,896.14
New Central Coal Co.	4,625.07	184,591.01
Total	83,152.16	.....
Previously	2,819,414.08	.....
Aggregate	2,902,567.04	2,902,567.04

COKE SHIPMENTS OVER WEST VIRGINIA CENTRAL & PITTSBURG RAILWAY.

Companies.	Week. Tons.	Year. Tons.
Davis Coal & Coke Co.	1,549.00	37,734.00
Thomas Coke Ovens	138.02	6,793.02
Cumberland Coal Co.	455.00	13,882.00
Total for week	2,142.02	.....
Previously for year	56,267.00	.....
Year to date	58,409.02	58,409.02
Same period last year	....	58,187.17

Coal and Coke Notes.

THE exports of coal from the port of Norfolk from January 1, 1892, to October 6, 1892, as reported by William Lamb & Co., agents, at Lambert's Point, is as follows:

No. of tons exported foreign	2,119½
" " coastwise	43,027½
Total amount for week ending Oct. 6	45,147
Total amount to Oct. 6	1,268,147

THE Excelsior Coal Co. has lately increased the daily output of its mines at Gurnee, Ala., from 300 to 700 tons.

THE Cahaba Coal Mining Co.'s entire battery of coke ovens at Blocton, Ala., will be lighted at an early date.

TRACKLAYING having begun on the branch lines of the Norfolk & Western Railroad to the rich coal veins on Big Tom and Russell creeks, in Virginia, it is probable that active developments will soon be began and shipments of coal commenced by November 1.

THE Big Vein coal mines, near Piedmont, W. Va., are now in operation by the Davis & Elkins Coal Co., about ninety men being employed. The opening into the old pillars of the Virginia mine has been completed, and all the coal is now coming from the new openings, and another opening is being drilled, to which the company will extend its rope haulage plant.

IT is said that the grading forces of the Norfolk & Western Railroad have found a new coal vein twelve feet thick on Twelve Pole river, in West Virginia.

THE Cedar Grove (W. Va.) Consolidated Coal Co., which has recently incorporated, intends opening extensive mines in the Kanawha valley, and preparations for work will be made immediately. Mr. A. Montgomery, of Covington, Ky., and Dr. David Ward, of Detroit, Mich., are among the incorporators. Their capital stock is $100,000.

THE Campbell's Creek Coal Co., of West Virginia, will put an electric haulage system of sixty horse-power capacity in its mines at Campbell's creek. It will also, it is said, open new mines at Handley.

THE Fuente Coal Co., three miles south of Eagle Pass, in Mexico, has recently closed a contract with the Southern Pacific for the transportation of 300 tons of coal per day over their line, this being the present estimated output of the mines. The company has spent some $200,000 in the purchase of lands, prospecting and developing their property, and has recently built a track from the mines to the Mexican International Railroad.

A LOCAL company at Eagle Pass, which has secured a lease for twenty-five years on 10,000 acres of land six miles north of that place, is sinking a working shaft to a depth of 100 feet, and expects to reach coal shortly. The shaft is near the line of the Southern Pacific Railroad, and a switch will be put in as soon as the company is ready to begin taking out coal.

AFTER a prolonged strike of six months the miners in the Boggs Run mines, at Wheeling, W. Va., returned to work last week at the old scale. This strike was for an advance and prevailed in the entire Wheeling district, affecting about 1,000 men.

MESSRS. J. J. HUCKABEE, L. C. Lindsey and H. M. Hodge have discovered a fine vein of coal in Arkansas about eighteen miles from Batesville, and intend to develop it immediately. The first outcropping was only an inch thick, but increases in size to fifteen inches.

THE Mobile (Ala.) Transportation Co. has been organized to transact a general coal exporting business, and it is said that the company has a contract to deliver 100,000 tons of coal to the Interoceanic Railroad at Vera Cruz during the coming year. Charles L. Huger is president of the concern.

THE Belington (W. Va.) Coal & Coke Co. has completed its ovens and has them in operation. Mr. A. Custer, general manager of the company, says that the coke is bright, compact and strong, and states his belief that it will rival Connellsville coke for furnace use.

THE coke production of the Pocahontas-Flat Top district of Virginia for some years past has been handled by the Hull Coal & Coke Co. The contract held by this company will soon expire, and the operators have not yet decided whether to renew it. The growing operations in this field make the handling of its product a most important position.

IT is stated that the plan which has for some time been under consideration by Pittsburg men to ship coal to Cuba by way of New Orleans, using whaleback steamers, is to be abandoned. No reasons are given, except the general statement that the scheme is not feasible.

THE Pikeville Coal & Coke Co. has commenced operations at its works near Pikeville, Tenn.

THE Mingo Mountain Coal & Coke Co., of Middlesborough, Ky., made its first shipment of coke to Chicago during the week.

THE Georgia State Fair, which will be held at Macon, Ga., from October 25 to November 4, promises to be unusually interesting and well attended. One original and important feature among the various exhibits will be that of road-making, showing sections of road properly constructed and the machines and methods most desirable for accomplishing the purpose.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 226 and 227.]

Atlanta's Cotton Trade and Manufactures.

By Col. I. W. Avery.

Atlanta has had a steady and healthy growth of her cotton trade and cotton manufacturing.

Located between the cotton belt of Georgia and its grain and mineral region, the centre of Southern railway systems, with the greatest cotton firm of the South, and probably of the Union, S. M. Inman & Co., with its headquarters here, Atlanta is building into a remarkable cotton trade.

Atlanta handled only 16,000 bales in 1872. In 1873 the number grew to 20,000, and in 1877 to 90,000, and has continued to expand until her enterprising merchants handle in one way and another the gratifying sum of 270,000 bales, and the city has set her pegs for the 500,000 point.

The local compresses, with an annual capacity of 600,000 bales, have had 165,000 bales to pass through, and the storage capacity of the town will reach 60,000 bales.

Atlanta has good grounds for expecting a constant enlargement of her cotton business. The cotton production contiguous to her is steadily enlarging, her railroad facilities are admirable and her merchants have ample capital and are enterprising. Inman & Co. do $20,000,000 of cotton trade, and their power and genius are potent factors in Atlanta's commercial prestige.

In 1879 Atlanta's first cotton factory, the Atlanta Cotton Mill, of 20,000-spindle capacity, was started with 13,000 spindles and 330 looms, and at once achieved a complete success. This initial mill was followed in 1883 by the Exposition Cotton Mills with 16,000 spindles and 600 looms, and in a short while the third factory, the Fulton Cotton Spinning Co., built and started a mill with 12,000 spindles and 450 looms. This mill has been changed to the Fulton Bag & Cotton Mills, and manufactures mainly for home consumption.

The two first factories, the Atlanta and Exposition cotton mills, manufacture shirtings and drillings, and not only find a ready market in the South, but have standing orders from the North, and from South America, Japan and China, to which distant countries they make shipments of their goods.

Atlanta has now in successful operation three cotton factories with no less than 40,000 spindles and more than 1,300 looms, working up annually 20,000 bales of cotton, employing over 1,000 persons, with a production of 27,000,000 yards of cloth a year worth $1,500,000. Soon the capacity is expected to be enlarged to 70,000 spindles and their proper complement of 2,300 looms, employing 2,500 hands, and converting 30,000 bales of cotton into 50,000,000 yards of cloth.

It is a significant fact, and typical of Atlanta's enterprise, and one which speaks volumes in favor of her as a manufacturing centre, that without water, and with her close proximity to coal fields, and cheap and convenient railway transportation, she now has 40,000 spindles in successful operation, with certainty of 70,000, while other cities, with mills for half a century and the finest possible water-powers, have not increased their operating spindles to 100,000. The matter demonstrates Atlanta's superior advantages and the enterprise of her citizens.

A New Cotton Mill in Norfolk.

NORFOLK, VA., October 10.

Editor Manufacturers' Record:

The fourth cotton mill at this point was put in motion on the 1st instant, making four very worthy enterprises, three of which have been established here during the past eighteen months. These four factories will employ in the aggregate nearly 1,000 hands, giving steady employment all the year. This is a healthy movement in the right direction.

A bale of cotton sent away in the shape of a bale brings only about $35, only a very small portion of which remains in Norfolk. When the bale is made up here into cotton goods it commands fully $70, and often much more, depending somewhat on what it is worked up into.

And the most satisfactory point to consider is that nearly all of the difference between the cost of the raw material ($35) and the value of the finished product ($70 and upwards) is paid to laborers, and therefore nearly all of the increase in value is left right here among us.

We are just getting started in the line of cotton manufacturing, and we expect to see dozens such mills erected here in the near future. Building operations continue very active. The completion of the "missing link," connecting the Norfolk & Western Railroad with all the great lines of the West, and connecting Norfolk and Chicago, is a source of great gratification to our people, and we can at this time hardly imagine the great amount of good our city is to receive from this most important connection.

We may congratulate ourselves that one by one the links are being forged that connect us in pleasant, profitable relations with the West, Northwest and Southwest. Looking seaward, we may congratulate ourselves that no troublesome sand bar disputes the entrance to the finest harbor in the United States.

We have secured twenty-eight to thirty feet of water from the entrance to the Chesapeake into our inner harbor at less expense, and can hold the same at less expense, than at any other point on the entire Atlantic or Gulf coast. In fact, the cost of making our harbor and the approaches thereto has been merely nominal, and the cost of maintaining the same is far less than that required at other points where nature insists on forming the troublesome sand bar.

With the transportation question happily settled for all time, and with a lower freight rate than other points, and being a first-class distributing point, and having excellent connections with the West, Northwest and Southwest by rail, and with the East and North by both water and rail, and with our people waking up to the necessity of prompt, effective action to secure, develop and foster the manufacturing interests of this seaport, we may safely count on continued and increased activity all along the line. A. JEFFERS.

Galveston's New Cotton Mill.

The new mill of the Galveston Cotton & Woolen Mills Co., which went into operation about a year ago at Galveston, Texas, is shown in the accompanying illustration. The mill is 300 feet long by 104 feet wide, four stories high. The boiler-house, 100 by 40 feet, is in the rear. The mill building is heated in cold weather by the Sturtevant system of hot air heating, the same apparatus being used in summer for ventilating. The plans for the mill were drawn by C. R. Makepeace & Co., of Providence, R. I., under whose supervision the plant was erected. The buildings were designed to meet the requirements of mutual insurance companies, with less expense than in ordinary mill construction.

The mill contains 25,000 spindles and 700 looms. The machinery is driven by an engine built by the E. P. Allis Co., Milwaukee, Wis., steam being furnished by a battery of Babcock & Wilcox boilers. The pickers were furnished by Potter & Atherton, Pawtucket, R. I.; the cards, railway heads, drawing and spinning frames, spoolers and looms by the Whitin Machine Co., Whitinsville, Mass.; the warpers by the Hopedale Machine Co., Hopedale, Mass., and the slashers came from Howard & Bullough, England, through C. E. Riley & Co., Boston.

MILL OF THE GALVESTON COTTON & WOOLEN MILLS CO.

The product of the mill is coarse grades of goods, from 10-ounce duck to 5-yard (five yards to the pound) sheeting. These goods are sold mostly to South American and Mexican trade. The mill uses about twenty bales of cotton per day.

The company intends to add to the mill a dyehouse, part of which will be used for bleaching purposes. The company has a capital of $500,000. The president is B. Adone, and Lawrence V. Elder is superintendent. Goods are sold direct from the mill.

Japanese Cotton Industry.

Japan has hitherto taken from Great Britain and India nearly three-fourths of the cotton yarn consumed in her manufactures, and a strong effort is being made in that country to avoid this necessity. During the past ten years thirty-seven mills, having 382,976 spindles and employing 20,000 hands, have been established at Osaka and in the surrounding districts. These spindles, working full time, would be capable of consuming 191,488 bales of cotton (400 pounds each) per annum, but thus far only 270,000 have been in operation, using 110,000 bales.

In 1889 a commission was sent to England and India for studying the improvements it was desirable to introduce into the Japanese factories, and from that time there has been an increased activity among the Osaka spinners and a sensible fall in the demand for foreign yarns. In 1888 the imports of spun cotton amounted to $13,611,898, in 1889 $12,522,039, in 1890 $9,928,062 and in 1891 $5,589,289. Japanese cotton is of inferior quality, not fit for spinning unless in a mixture, its staple being short and rough to the touch. Spinners are, therefore, obliged to take foreign material. In 1891 the various cottons delivered to the factories showed the following proportions: Native 25 per cent., Shanghai and Laigon 35 per cent., Bombay 30 per cent., American 5 per cent. and Corea 5 per cent. Of late Cambodia has opened a trade with Japan in this staple which is of increasing importance.

Two Successful Knoxville Mills.

The Brookside Cotton Mill, at Knoxville, Tenn., was started some six years ago with an invested capital of $150,000, furnished by local capitalists. The work proceeded quietly without any solicitations for assistance, and the mill has been in continuous operation, with a gradually increasing demand for their goods, ever since. The output is sheetings, drills, ducks and many specialties.

About 125 persons are employed at the mill, which consumes on an average ten bales of cotton per day. During the past year the carding and spinning machinery and 176 looms turned out 1,024,916 pounds of goods, equal to about 3,100,000 yards. The mill is supplied with an automatic water system and has its own electric-light plant. The goods are in steady demand both North and East, and large orders are received from St. Louis and that section, as well as from the cities near by.

Another mill in Knoxville worthy of note is the Knoxville Woolen Mill, started about five years ago with a capital of $500,000. This also is the work of local capitalists, and its eminent success reflects great credit both upon their judgment and management. At first the output was small, but it was gradually enlarged with the demand for jeans. The supply of wool from the surrounding country was found insufficient to keep up with the increased production, and large quantities had to be purchased elsewhere. The reputation of the goods grew steadily, and with it an increased home and foreign demand, which has resulted in the present mill, which is said to be the largest jeans mill in the world. Recently a dyehouse has been put in, and it is now the intention to make all colors of woolen goods.

The mill employs 500 hands, and is equipped with 600 looms, twenty-one sets

of cards, seven boilers and a large water wheel.

Cotton Bagging.

There is no article more closely associated with cotton and the cotton States than that coarsest of fabrics, jute bagging, with which the fleecy staple is wrapped in preparing it for market. But it has not received much attention from the press since the war between the Farmers' Alliance and the jute bagging manufacturers came to an end.

It was hoped that that most notable and creditable episode in the history of the Alliance would result in the providing of a substitute for jute of home production, pine-leaf fibre, for example, and such doubtless would have been the result had the manufacturers of jute bagging kept the price up as in 1888. Since then the prices have gone so low that there is evidently no room left for domestic competition with the Indian jute growers.

The decline in the prices of jute bagging has been remarkable. Prior to 1870 nearly all the bagging used in the United States was imported, and the price at New York went as high as thirty-six cents a yard. As its manufacture came to be extended in this country the price rapidly declined, reaching at New York in September 14½ cents in 1872, 12¼ cents in 1877, 10⅛ cents in 1882, 7¾ cents in 1877 and 6¼ cents in 1891. And for several months in 1891 bagging actually sold for 5¾ cents at New York.

The advance of nearly three cents a yard in 1888 was occasioned by a combine among the manufacturers, which was maintained for only two years. The last crop of Indian jute was very light, and it is expected that there will be a considerable advance in bagging before the close of the present year.

It seems wrong that millions of dollars should be sent out of the United States every year for the fibre which might be produced at home, yet it is perhaps out of the question for Americans to compete with Indian labor costing but a few cents a day, unless there shall be provided better mechanical appliances than are now available.

An economic wrong for which there is no excuse consists in the fact that one-half of the bagging used in the South is made in Northern mills. Nine of the sixteen mills are located in Northern States, and each of them gives employment to several hundred hands and support for a number of persons several times greater. That people in Massachusetts and New York should manufacture this bulky article of Southern consumption is a striking example of our wasteful system of domestic economy.—Jacksonville *Times-Union*.

Southern Textile Notes.

The Greenwood (S. C.) Cotton Mills, manufacturers of sheetings and drills, contemplate putting in 3,000 additional spindles and 106 looms, together with all necessary machinery for same. Of this concern W. L. Durst is president; J. S. Bailey, secretary and treasurer, and N. H. Morrill, superintendent.

The Jackson (Tenn.) Woolen Manufacturing Co.'s property is to be sold at trustee's sale on November 22d.

THE semi-annual meeting of the Western and Southern jeans manufacturers was held at Louisville, Ky., last week. The woolen mill industry was discussed and found to be in a good condition. Nothing was made public as a result of the meeting.

MR. L. ACREE, treasurer of the Jonesboro (N. C.) Cotton Mills Co., writes us that the company expects to build another cotton mill next year. Work on it will probably be begun in about six months.

WORK on the additional building for the Anderson (S. C.) Cotton Mill is progressing rapidly, and everything indicates its completion by February 1st. It is to be three stories high, 265x76 feet, and will be equipped with 10,000 spindles and 336 looms. J. A. Brock is president and treasurer of the company, and R. E. Ligon, secretary and manager.

THE Elm Grove Cotton Mills, of Lincolnton, N. C., manufacturers of warps and yarns, intend to put in an electric stop-motion "Denn" warper.

THE Pee Dee Manufacturing Co., of Rockingham, N. C., manufacturers of ginghams, stripes, warps and checks, is now building a two-story addition to its mill 116x50 feet in size. When completed the company intends to place in this building 1,200 additional spindles and 180 looms. The company's present equipment of 4,052 spindles and 180 looms is now running regularly and turns out a fine class of goods. The concern has a paid-in capital of $150,000. Its officers are Walter L. Steele, president and treasurer, and William Entwistle, superintendent.

THE officers of the Pearl Cotton Mills, now under construction at Durham, N. C., have not fully determined as to the class of goods that will be manufactured, and therefore have not as yet placed the order for the equipment of the plant. They expect to start the mill next spring.

THERE is prospect of a cassimere mill being erected at Carrollton, Ky., in the near future. Mr. Frederick Balbian, at present superintendent of the Carrollton Woolen Mills, is desirous of forming a company for that purpose, and proposes a $25,000 concern, one-fifth of which stock he proposes to subscribe himself. Mr. Balbian has, it is said, the requisite knowledge for the operation of the plant, having been connected at one time with similar mills in Germany, and if he cannot secure the required capital in Carrollton will go elsewhere with his project. The citizens of Carrollton should not allow to escape them this enterprise, which would be both valuable to the city and no doubt a paying institution.

THE new cotton mill of the West Huntsville Cotton Mills Co., at Huntsville, Ala., is rapidly going up, and the machinery is being received. Work has commenced on the erection of twenty-five cottages to be occupied by the operatives of the concern.

THE cotton mill of the Georgia Manufacturing Co., near Athens, Ga., was totally destroyed by fire on the 9th instant, throwing over 300 operatives out of employment. The loss is estimated at $150,000, $20,000 of which was in new additional machinery which had just been received. The insurance is said to have been only $10,000, but the plant will be rebuilt. John R. White is president of the concern.

MESSRS. O. W. WILDER & CO., of Fredericksburg, Va., manufacturers of silk, have let contract for the erection of an addition to their mill.

IT is reported that the Suffolk (Va.) Knitting Mills will build an addition to its plant and put in sufficient machinery to double its capacity.

THE Tuscaloosa (Ala.) Cotton Mills, manufacturers of fine plaids, are averaging a daily output of 10,000 yards. The company, which organized last May and purchased this plant, has been very successful from the start, and present indications point to the fact that in the near future the mill's product will exceed its supply. Mr. E. N. C. Snow, the president of the concern, recently made an extensive trip through the West and disposed of large quantities of the goods.

THE Sibley Manufacturing Co. is making considerable improvements to its cotton mill at Augusta, Ga. A new carpenter and machine shop is being erected, new pickers, looms, cards and spindles are being added, and in fact the mill is being thoroughly remodeled. The output of the plant is awning stripes, ducks, ticks, plaids and brown goods. W. C. Sibley is president; John W. Chaffee, secretary and treasurer, and James C. Platt, superintendent.

THE Little Rock (Ark.) Cotton Mills have closed a contract with J. H. Eres, of Louisville, Ky., to furnish 1,000 pounds of mop yarn per month for the balance of the year.

THE production of the Raleigh (N. C.) Cotton Mills last month, operating twenty-six days, amounted to 105,400 pounds of soft hosiery yarns. The plant contains 6,192 spindles. J. J. Thomas is president of the company, and J. S. Wynne, secretary and treasurer.

IT is reported that Mr. Joseph H. Seffner, of Belfast, Ireland, has leased the Terrell creamery building at Terrell, Texas, and will remodel it to a mill for the manufacture of cotton batting.

A FIRM has been formed at Reidsville, N. C., under the title of Messrs. Boyd & Co., and will at once install machinery for the weaving of seamless sacks.

CONTRACT has been let to C. H. Norton for the erection of the building for the new Pearl Cotton Mills to be established at Durham, N. C. The building will cost about $30,000. J. M. Odell, W. W. Fuller and associates compose the company.

THE Conelius Cotton Mills, of Davidson College, N. C., manufacturers of cotton yarns, have recently added the following new machinery: Twelve Whitin cards, four reels, furnished by Lindsey Hyde, of Philadelphia, and one Bramwell feed for the cotton opener. A new boiler-house has also been built. The company has orders ahead for the next six months, which shows an excellent reputation for its product in the market.

THE Dunavant Cotton Manufacturing Co., of Morganton, N. C., manufacturers of warps, is running in full as usual, operating over 3,000 spindles. The plant is now paying so well that the company decided to greatly increase its output, and plans are now being perfected to enlarge it and put in 2,000 additional spindles. As the mill is running day and night its output will be equal to that of a 10,000-spindle plant. S. D. Dunavant is president of the concern, and E. F. Reid, treasurer; capital $50,000.

THE Erwin Cotton Mills Co., now building at Durham, N. C., has let contract to the Potter & Atherton Machine Co., of Pawtucket, R. I., for the entire equipment of its mill.

THE Lexington (S. C.) Manufacturing Co. has completed the building for its cotton mill, and is now placing the outfit of machinery.

THE receipts of cotton at Norfolk, Va., for the past season, as shown by the report of the superintendent of the Consolidated Compress, were 534,948 bales, exports 196,940 bales, coastwise and overland shipments 338,326, and for local mills 2,136 bales.

MR. MOSES H. CONE, president of the Cone Export & Commission Co., of New York, dealers in Southern plaids, writes us that he is endeavoring to organize a company for the purpose of finishing Southern cotton goods, contemplating the erection of bleachery works later on. Mr. Cone is now trying to secure certain contracts in the South which would ensure the erection of the proposed plant. The project has not as yet assumed a definite shape.

Cotton Market.

NEW ORLEANS, LA., October 10.

Editor Manufacturers' Record:

The crop of 1888-89 was 6,935,000, and the acreage of that year was 19,200,000 according to first estimate, but subsequently it was shown to have been about 600,000 larger, or 19,800,000. The October report of 1888 was 78.9. The maximum estimate of acreage this year not only here, but we believe generally, is 18,500,000, and the bureau to-day says the average was 73.3. Last year the October report was 75.7, while the crop was 9,000,000, but the acreage was about 2,000,000 larger. The crop was made under extraordinary and unusual conditions, and therefore was of phenomenal growth. We believe most decidedly in material damage to the crop this year, and the bureau report of to-day confirms our estimate of a crop of about 7,250,000. The crop may turn out to be 8,500,000, but as we are not afraid of going on record, we put our figures at what we think the outlook justifies. Our own estimate of the bureau, which we made in one of our market reports of last week, was 72. The general estimate here we think was about 70, and therefore a decline of only two and a-half points from last year was considered a bear argument and the market went to pieces. The decline from the opening here was thirty-one points, and we close twenty points lower than Saturday. We are backing the judgment of the producer this year because we think that he has a better opportunity of seeing the actual loss in the depreciation of the crop to a greater extent than he has ever had before, or at least for many years, and our advice, which has been for several weeks now to buy on depression, still holds good. There is one thing about the bureau report to-day that is unintelligible to us, viz., that the responsible people who have been writing to their business correspondents in this city for the last four weeks have indicated a serious loss in condition, and as the bureau gets its information from the same character of correspondence, we entirely fail to see how any such result could have been arrived at as the figures they name to-day. We are not criticising the bureau—we are merely giving what is an apparent inconsistency somewhere. It hardly seems probable that the bureau's representatives in the South could have sent reports different from their neighbors almost without exception. The trouble has been that the market has been overbought, and the liquidation to-day has brought about a healthier condition of things. New York apparently paid attention to the Galveston *News's* estimate of 30 per cent. reduction throughout Texas, and indicating a crop of about 1,700,000 bales. Frost news came to us from North Texas to-day, but all these circumstances were forgotten in the general desire to realize both before and after the bureau. We believe that the holders of spot cotton will continue to hold firmly, and bringing contracts down to middling prices up to January in this market, putting matters here in a very much better shape for the long side. We expect to see 5d. in Liverpool, and therefore believe in buying on depressions.

ATWOOD VIOLETT & CO.

CLOSING PRICES OF FUTURES OCTOBER 12.

Months.	New Orleans.	New York.	Liverpool.
October	7.65		4 18-64
November	7.68		4 18-64
December	7.73		4 20-64
January	7.83		4 22-64
February	7.93		4 25-64
March	8.03		4 27-64
April	8.13		4 30-64
May	8.23	Holiday.	4 32-64
June	8.33		4 33-64
July	....		....
August	....		....
September	....		....
Tone of market.	Quiet and Steady.		Quiet and Steady.

CLOSING PRICES OF SPOT COTTON OCTOBER 12.

Grade.	New Orleans.	New York.	Liverpool.
Middling	7 11-16		4 13-16
Low middling	7 3-16		4¼
Good ordinary	6 11-16	Holiday.	4 1-16
Tone of market.	Quiet and Steady.		Easier.

PHOSPHATES.

A Market for American Fertilizers.

Vice-consul Wright, of Jamaica, in the September consular report, states that for the year ending March 31, 1891, there was imported into the island fertilizers to the value of $13,794.12, of which $11,878.17 in value came from Great Britain, $407.57 from the United States and $1,508.55 from the West Indies. During 1892 the imports were $19,999.80, of which $19,529.84 came from Great Britain and $245.24 from the United States.

The explanation of the practical monopoly of the United Kingdom in this trade is explained by the fact that the English manufacturers of commercial fertilizers hold themselves in readiness to analyze samples of the soil in order to arrive at the chemical deficiences, and then compound the fertilizer to meet such requirements. Intelligent and practical users of fertilizers state that if American manufacturers will hold out the same inducements in regard to analyzing the soil and manipulating the manure to meet the conditions required, and in addition will sell at the same price fertilizers of the same commercial value, the item of freights is so much in favor of the United States that the trade could readily be secured.

Although the area of Jamaica is only 4,193 square miles, it contains a great diversity of soils, and would require the honest and intelligent preparation of fertilizers on the part of American manufacturers to obtain and hold this trade. The principal crops, sugar-cane and bananas, are very exhaustive to the soil, and within a few years fertilizing must be largely resorted to, as the lands are now virtually worn out, and the system in the past of turning out old lands and taking in new cannot be resorted to, as the lands suitable for the crops named have all been under cultivation.

Consul Keevil, of Martinique, states that there is annually imported to that island from 20,000 to 25,000 tons of nitrates, phosphates and ammonia. About one-half is in a prepared state and the balance in crude form. This latter is worked up by the Compagnie des Engrais de la Martinique at their factory in the city of St. Pierre. All of this material is imported from Great Britain, packed in strong bags or barrels. The finished product is used for sugar-cane.

An analysis of two grades used is as follows: Cross's "special" cane fertilizer—nitrogen, equal to 9 per cent. non-volatile ammonia; soluable phosphate, 19 to 20 per cent.; insoluble phosphate, 3 to 5 per cent.; soluble salts of potash and alkalies, 3 to 4 per cent. Cross's "early potassic" fertilizer—nitrogen, equal to 6½ per cent. ammonia; phosphoric acid, soluble, equal to 15 to 16 per cent. soluble phosphates; soluble phosphoric acid, in finely prepared form, equal to 5 per cent. phosphate of lime; potash, equal to 10 per cent. sulphate of potash.

There are no duties on phosphates, and wharfage is nominal. Small lots of sulphate of ammonia and nitrate of potash have been recently imported to the United States. The price, laid down at Martinique, is about 230 to 235 francs ($46 to $47) per ton of 2,240 pounds for the Cross and other English grades.

The Sicilian Sulphur Industry.

Consul Pugh, of Palermo, in reporting upon the Sicilian brimstone industry during the past year, directs attention to the fact that during the past year prices have maintained a steady and healthful rise, sulphur now commanding a price of $25 per ton at the mines. There is, however, much consternation over the danger of losing the American market through the strong competition of pyrites. From 1889 to 1891 the exports to England and India decreased 14,932 tons, and exports to the United States decreased 11,537 tons. The United States now consumes 97,470 tons out of a total of 293,041 tons exported from Sicily. During the fiscal year ending in 1891 the total receipts of second and third quality brimstone at United States ports was as follows:

	Tons.
Baltimore	12,065
Boston	2,050
Breakwater	630
Charleston	21,456
New Orleans	500
New York	49,063
Philadelphia	6,880
Port Royal	700
Savannah	1,550
Wilmington	2,600
Total	97,470

For some reason American buyers of brimstone purchase through English houses, having to pay them commissions. As these houses have no connection with the mines other than as dealers and brokers, it would seem that American users should purchase direct from the mines and thus avoid the commission cost.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, October 13.

The phosphate market during the week has been very quiet, with a light volume of business reported. In charters there has been very little doing, the last reported being the Clara Donald, to load 1,700 tons rock at Port Royal for Baltimore. The arrivals during the week were the following vessels from Charleston, S. C.: Irene Thayer, with 550 tons; B. F. Lee, 600 tons, and Elizabeth Baizley, with 650 tons phosphate rock; also the Nellie W. Howlett from Ashepoo, S. C., with 800 tons rock. Prices throughout the general list show no material change and values are generally steady. Ashley river, $4.75, and Charleston, $5.00. River rock, 58 per cent., is steady at $4.50 f. o. b. Florida rock is unchanged, and the prospects for better prices are somewhat better. River pebble is quoted at $4.00 to $4.25 for Charlotte Harbor and Tampa 60 per cent. product, and $3.50 to $4.00 for 50 to 55 per cent. product. Land pebble holds firm at $4.50 to $5.50 f. o. b. Tampa, 68 to 72 per cent. Florida boulder, 75 to 80 per cent. product, is steady at $8.50 per ton f. o. b. Fernandina. The following quotations represent the prices current at the close:

Phosphate rock f. o. b. Charleston	$4 75@5 00
" " Peace river	4 00@4 50
" " Baltimore	6 00@7 00
" (ground)	8 50@9 00

ANTHONY, FLA., October 10.

The outlook for phosphate mining in this section shows more signs of prosperity than for some time past. The various companies are evidently preparing for a good fall and winter's work, and all the modern appliances to facilitate the operation of mining their respective properties are being adopted. Of the Anthony companies, eight are mining and two others have their plants nearly ready for business. The Anthony Company started its machinery for the first time on the 22d of September and is now doing regular mining work. Its large McMyler revolving derrick is a novelty here in phosphate mining, as it is the first of this kind that has been erected for that purpose. The machine runs on a track of 14½ feet gauge, and its boom, which is 65 feet long, sweeps an area of 8,000 square feet. It was manufactured and erected by the McMyler Manufacturing Co., of Cleveland, Ohio. The plant of the Central Phosphate Co., which is a duplicate of the Anthony plant excepting the dryers, after having erected a derrick and dryer, is running satisfactorily. The plants of both these companies are now very complete in every detail, and it is expected they will report a good season's work. The Deacon Company is doing good work, and has started a washing plant, while they will continue the grinding business for the local trade. All the companies mentioned in my last letter are now in good shape, and, with the betterments which have been added, there is no reason why the output should not be satisfactory. It is said that a company composed of New York capitalists has been organized to operate near Albion, Fla. The plant of this company, which will include the first double steel log washer used in phosphate work in Florida, will be the largest washing plant in the State. The company has 240 acres of land and is capitalized at $100,000.

CHARLESTON, S. C., October 11.

The general tone of the phosphate market at this port is a shade better than a week ago, and operators both here and at points of production look for a better range of prices in the near future. There is a fair demand for phosphates from home companies, one company receiving 10,000 tons closed contract with mining company at $3.65 for crude and $4.00 for hot air dried. The coastwise shipments continue fair, and during the past week the shipments were about 3,000 tons, and to foreign ports 175 tons. Advices from Europe continue to improve, and there is a good demand for 14 to 15 per cent. superphosphates. Values during the week have been very steady without change; crude rock is quoted at $4.00 to $4.25 f. o. b., and hot air dried $5.00 to $5.25 f. o. b. There is a light demand for ground rock, and the quotation at the close is $7.00. In freights there is a fair offering of tonnage, but the market is weak and irregular. Rates from this port to Baltimore are quoted $1.80 and to Richmond, Va., $1.90; Ashley river to New York $2.25. The comparative exports of crude phosphate rock and ground from the port of Charleston from September 1, 1892, to October 7, 1892, and for the same time in 1891 are as follows:

	1892-93.		1891-92.	
	Crude.	Ground	Crude.	Ground
Baltimore	4,585	.....	7,435	.....
Philadelphia	2,261	.....	1,350	.....
Boston	.....	.....	.....	.....
Elizabethport	.....	.....	.....	.....
Wilmingt'n, Del.	550	.....	.....	747
Barren Is., N. Y.	.....	.....	510	.....
New York	1,942	200	750	688
Mantua creek	.....	.....	.....	.....
Weymouth	1,855	.....	1,775	.....
Richmond	2,613	.....	586	.....
Seaford, Del.	.....	.....	.....	.....
Newton ck., N. J.	.....	.....	582	.....
Wilmingt'n, N.C	.....	.....	.....	.....
Welsh Point	.....	.....	.....	.....
Orient, L. I.	.....	.....	.....	.....
Other ports	780	.....	480	300
Total exports	14,586	200	13,468	1,735
Foreign ports	175	.....	.....	.....
Grand totals	14,761	200	13,468	1,735

The books of the State treasurer show the following receipts from phosphate royalties during the past year:

1891	November	$ 1,035 58
	December	5,737 22
1892	January	5,098 56
	February	6,535 74
	March	15,710 13
	April	11,145 95
	May	3,241 95
	June	20,576 69
	July	14,332 69
	August	24,423 63
	September	36,954 69
		$144,792 83

FERNANDINA, FLA., October 10.

The outlook here and throughout the phosphate region is somewhat brighter, and to all appearances preparations are being made for a good fall and winter's trade. Advices from European markets are better, and the number of charters being closed at primary points indicate a more active movement in the near future. The shipments of phosphates so far this month aggregate 12,790 tons. Five steamers and two sailing vessels are under charter for cargoes during October. The September shipments include 1,750 tons of hard rock to England from the Albion Company, and a cargo to Stettin, Germany, and Lands Krond, Sweden. The Charlotte Harbor Company has shipped from Punta Gorda 2,800 tons pebble to England, and the Peace River Company 1,600 tons pebble to Germany.

Phosphate and Fertilizer Notes.

A. H. AGNEW & CO., of Kendrick, Fla., are making extensive arrangements to mine soft phosphate for the Virginia trade. They are duplicating the machinery of the Belleview Mining Co., and will ship mainly to Alexandria, Va.

THERE are now five large vessels at the Mullet Key quarantine station which will load at Tampa, Fla., with phosphate after the required time of detention.

THE steamship J. M. Lockwood, Captain Jenkins, arrived on the 5th at Fernandina from Las Palmas. She will take on at that port 1,100 tons of phosphate, and finish her cargo at Brunswick, Ga.

THE National Peace River Phosphate Co. at Bowling Green, Fla., have put on a night force in order to keep up with the demand.

AT a legal sale at Ocala, Fla., on the 3d instant fifty shares of the Florida Phosphate Co.'s stock sold for $725.

THE British steamship Thomas Anderson, from Tampa, Fla., arrived at New Orleans on the 7th instant with 1,797 tons phosphate for Hamburg, and will finish cargo at that port for Bremen. The steamship Glenmarvis was loading phosphate at Tampa, Fla., and would follow the Thomas Anderson and complete cargo at New Orleans.

THE British steamship Thomas Mellville cleared on the 1st instant from Punta Gorda for Hamburg, Germany, with 2,200 tons pebble phosphate shipped by the Charlotte Harbor Phosphate Co.

J. C. LORE, one of the largest orange growers of Leesburg, Fla., has placed an order with the Belleview Mining Co. for 100 tons of soft phosphate.

THE fertilizer market at Mobile, Ala., is reported fairly active, with a good general demand. The shipments for the week reported were 3,100 sacks, previously 7,479, total 10,579, against 4,420 sacks for the corresponding period last year. Values continue steady without change; acid phosphate $16.00 to $17.00, kainit $15.00 to $15.50, magnet soluble guano $22.50 to $25.00, Mobile standard $23.00 to $25.00, soluble Pacific guano in car lots $25.00, and perfection guano $21.50 to $23.50.

THE shipments of phosphate are increasing in the vicinity of Lakeland, Fla. Large special trains have commenced running from that point to Tampa and from Inverness to Lakeland.

THE Standard Phosphate, Chemical & Mining Co., located at Kendrick, Marion county, Fla., is now in full operation. Many of the latest improvements have been adopted in their plants, and they have every facility for preparing Florida's great natural fertilizer. This enterprise is regarded as a very important one to the State. Mr. H. Agnew, of Ocala, is president of the company, and Mr. M. E. Harlow, secretary and treasurer.

THE Deacon Phosphate Co., in Marion county, Fla., is preparing samples of aciduated or superphosphate for use as a wheat fertilizer, the tests to be made in Virginia. This experiment will be an important as well as an interesting one, and will demonstrate the utility of this material as a commercial fertilizer and its value as a high-grade product.

THE kaolin works two miles north of Keuka, Fla., are making extensive improvements in the way of new machinery, and the industry promises to be of great value to that section. A large bed of stone has also been discovered near the same place which is pronounced by experts to be identically the same as the stone of which the celebrated Michigan grindstones are made.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 227.]

The San Antonio & Aransas Pass.

The official announcement of Charles B. Peck, assistant general manager of the San Antonio & Aransas Pass Railway, that the Southern Pacific had not purchased that property and that all negotiations to that end were broken off was unexpected. The report that such a deal had been effected was generally credited. It is thought that its failure to go through is due to a hitch in arranging the terms for payment, or to the legal complications in which the road is involved. The courts are busy with a number of suits growing out of the recent receivership and the reorganization of the company. Thornton, Wright & Co. have filed suit in intervention in the case of Johnson & Hansen against the company to secure payment of claims and judgments amounting to $16,000. It is stated that their claims were transferred to the reorganization committee in consideration of $5,000 cash and certificates of the face value of $14,000 calling for first mortgage bonds (par value) issued under the plan of reorganization, and at the time of delivery understood by the intervenors to have a market value of sixty cents on the dollar. They assert that they had not then and have not now any market value whatever, and pray to have the transfer set aside or the reorganization committee compelled to deliver to them a specified additional number of certificates, and that an injunction be issued restraining the sale of the bonds of the road until these certificates are recognized as valid claims for the bonds represented. B. F. Yoakum and J. S. McNamara, the former receivers, have entered suit against Uriah Lott and Mifflin Kenedy to secure a judgment for $173,592. It appears that the plaintiffs are liable for that amount because of the purchase, as receivers, of rolling stock and property from the defendants. They allege the defendants acted fraudulently in the transaction. J. S. McNamara also sues B. F. Yoakum and others for $10,000 damages for trespass on and ejectment of complainant from certain property. He also sues U. Lott, H. B. Andrews, M. Kenedy, A. C. Schryver and B. F. Yoakum, seeking the payment of $22,537 to the San Antonio & Aransas Pass Railway Co., which he alleges is due for an investment by the defendants in 1889 of funds of the company in certain property which was afterwards sold for their benefit. The court is investigating the accounts of the late receivers, and it is averred that a shortage of probably $30,000 will develop. The time for filing claims against the company for debts incurred during the administration of the receivers has expired, but as there are between $300,000 and $400,000 of claims still outstanding, it is probable that the time will be extended. About $700,000 or $800,000 in cash have already been paid out on claims under the direction of the reorganization committee. In connection with this article a notice issued by the president, D. B. Robinson, to the stockholders of the company is of interest. It calls for a meeting of stockholders in San Antonio on December 15 to consider a proposition of making a mortgage securing 5 per cent. bonds in an amount not exceeding $16,800,000, to be issued at a rate not exceeding $21,000 per mile of constructed road, or securing 4 per cent. bonds not exceeding $21,600,000, to be issued at a rate not exceeding $27,000 per mile of constructed road, and to determine which form of mortgage, if either, should be made within the above limits, and to authorize the making of such mortgage as may be determined upon and to consider the form thereof, and to authorize the issuing and disposing of the bonds thereunder.

The further object of such meeting will be to consider a proposition to increase the capital stock of the company from $5,000,000 to an amount not exceeding $12,500,000, and to consider the question of making one-half of the entire issue preferred stock carrying 5 per cent. non-cumulative dividends, and to authorize such increase as may be determined upon.

The Cotton Belt Route.

The annual report of the St. Louis Southwestern Railway Co. for the year ending June 30, 1892, has been published. This is the first annual report of the "Cotton Belt Route," as it is familiarly known, since its reorganization and change of name from the St. Louis, Arkansas & Texas Railway, which was on June 1, 1891. The mileage of the road is 1,416.9, gross earnings $4,636,461, operating expenses $3,824,294, net earnings $812,167, which, added to other income, gives a total income of $937,266. Taxes and interest amount to $917,574, leaving a surplus of $19,692. In comparison with the results of the operations under the receivers, who were in control prior to June 1, 1891, the report shows an increase of $312,806 in gross earnings, a decrease of $1,025,360 in operating expenses, net earnings of $812,167, against a deficit of $525,999, making a total net increase of $1,338,167. The betterments, which are included in operating expenses, amounted to $122,266, a decrease of $959,893. The capital stock of the company consists of $20,000,000 preferred stock and $16,500,000 of common, a total of $36,500,000. The funded debt consists of $20,000,000 first mortgage 4 per cent. bonds and $8,000,000 second mortgage 4 per cent. income bonds.

The freight traffic of the company shows a fair increase over the previous year, mainly attributable to the improved physical condition of the property. Had it not been for inability to command sufficient cars to take care of the business offering during the busy season, the railway commission of Texas, the instability of rates to and from the Southwest and the general depression resulting from low price of cotton, the showing of the company would have been much better.

Louisville & Nashville.

At the annual meeting of the stockholders of the Louisville & Nashville the following officers were re-elected: President, Milton H. Smith; first vice-president, Stuart R. Knott; second vice-president, A. M. Quarrier; secretary, J. H. Ellis, and treasurer, W. W. Thompson. The office of third vice-president, made vacant by the resignation of W. J. Wood, was not filled. The annual report for the fiscal year ended June 30, 1892, submitted by President Smith, shows that company controls in whole or in part 4,731 miles of road. The earnings and expenses are based on an average mileage of 2,858 miles, which is about 600 miles more than the average for 1891. This increase includes the Kentucky Central, Alabama Mineral, Pensacola & Atlantic, Cumberland Valley branch and the Clarksville Mineral hitherto operated separately. The gross earnings for the year aggregated $21,235,721, an increase of more than two millions over the preceding year. The operating expenses were $13,792,122, or 64.95 per cent., leaving net earnings from traffic of $7,443,599, or 35.05 per cent. When to this is added the income from investments of $533,293, the total income is $7,976,893. The disbursements, covering taxes of $513,185, rentals, interest, etc., of $4,860,878, Georgia Railroad loss $124,695, loss on other roads $128,001 and dividends of $2,376,000, foot up $8,002,759, leaving a deficit of $25,866. The balance to the credit of income account June 30, 1891, was $656,226, which after meeting the deficit leaves $630,359 to the credit of that account June 30, 1892.

The lease of the Georgia Railroad netted the company $60,658 the previous year, but this year shows a loss of $124,695, making a difference of nearly $200,000 in the income account. The capital stock was increased during the year by $7,000,000 to $55,000,000. Of this increase $4,800,000 has been issued and disposed of, leaving $2,200,000 yet to be issued, and making the amount of capital stock outstanding at the date of the report $52,800,000. The bonded indebtedness is $75,397,666. The increase over the preceding year in the bonded debt is $8,675,000. This increase is accounted for by betterments of $702,000, purchase of Nashville, Chattanooga & St. Louis stock $874,000, bonds redeemed for sinking funds $255,000 and bonds of the Kentucky Central and Maysville & Lexington roads amounting to $7,142,000, a total of $8,946,000, from which is deducted $271,000 of bonds redeemed during the year. The road has 2,680 miles laid with steel rails, of which 134 miles were laid during the year, and there are 161 miles laid with iron rails. The old board of directors was re-elected as follows: August Belmont, J. A. Carter, J. A. Horsey, A. Marcus, William Mertens, Eckstein Norton, J. D. Probst, Thomas Rutter, Joseph S. Rodgers, Edmund Smith, Milton H. Smith, J. H. Schiff. Mr. Belmont was re-elected chairman of the board.

Norfolk & Carolina.

The annual meeting of the stockholders of the Norfolk & Carolina Railroad, which extends from Primers Point, Va., to Tarboro, N. C., and forms part of the Atlantic Coast Line, connecting that system with the port of Norfolk, was lately held in Norfolk. The reports of the officers showed that the road is in excellent condition and business steadily increasing. The following officers were elected: President, Warren G. Elliott; vice-president, H. Walters; directors, Wm. T. Walters, B. F. Newcomer, W. J. Doyle, Michael Jenkins, of Baltimore, and C. G. Ramsay, of Norfolk. Messrs. Jenkins and Ramsay, of the board of directors, were chosen in place of United States Senator Calvin S. Brice, of Ohio, and H. C. Fahnestock, of New York.

Seaboard & Roanoke.

An encouraging account of the operations of the Seaboard & Roanoke Railroad Co. was rendered at the recent meeting of stockholders. The annual report of the president shows earnings from operation $705,469, expenses of operation $471,706, net income from operation $233,763, income from other sources $84,890, total income $318,653, less taxes, interest, dividends and other charges, $258,471; surplus $60,182. John M. Robinson was re-elected president, and R. C. Hoffman, vice-president; Enoch Pratt, Louis M. Lane, L. M. Robinson, R. S. Tucker and L. R. Watts, directors.

Tracklaying in 1892.

The *Railway Age* figures that during the nine months from January 1, 1892, to September 30, 2,519 miles of main track have been laid on 200 different lines in the United States. The track laid in the South by States is given as follows:

	Miles.
Alabama	4.50
Arkansas	21.00
Florida	87.12
Georgia	53.10
Kentucky	10.00
Louisiana	55.50
Maryland	19.50
North Carolina	41.70
South Carolina	33.25
Tennessee	57.62
Texas	195.50
Virginia	3.60
West Virginia	175.14
Total	667.79

It is calculated that there are in the United States over 1,500 miles of road in sight on which track will be laid before the end of the year.

Another Terminal Committee.

At a meeting in New York on October 7 of the new Richmond Terminal directors a committee consisting of George F. Stone, William Strong and George C. Maben were appointed on reorganization. The executive committee was instructed to make a thorough investigation into the physical and financial condition of all the properties in the Terminal system at the close of the fiscal year June 30, 1892, and to report to the board to enable the committee on reorganization to avail themselves of such information. It was officially stated that all published reports purporting to give detailed plans for reorganization are without foundation. The matter has been discussed in a general way, but no plan of organization has been formulated, submitted or approved.

Railroad Notes.

THE earnings of the Richmond & Petersburg Railroad Co. for August, 1892, were $28,157.88, expenses $19,673.93, and the earnings of the Petersburg Railroad Co. for same month were $39,714.49, expenses $27,149.28.

IT is computed that the October disbursements of railroads on account of dividends and interest will aggregate $33,100,125, of which amount $11,323,038 are dividends on $686,385,949 of stocks, and $21,778,087 are interest on $794,753,272 of bonds.

THE annual meeting of the stockholders of the New Orleans & Northeastern Railroad Co. will be held in New Orleans on November 2.

THERE is at present no truth in the report of a system being formed by a combination of the Atlanta & Florida, Georgia, Midland & Gulf and Columbus Southern Railroads. No steps have been or will be taken for the present towards the reorganization and extension of the Atlanta & Florida.

THE report of President Lash, of the Cape Fear & Yadkin Valley Railway Co., submitted at the recent annual meeting of stockholders, showed that the earnings of the road for the past year more than covered the fixed charges, and that the connections recently made were developing rapidly increasing business and gave certain promise of large increase of traffic in the future. During the year the physical condition of the road was generally approved. There was no change made in the directory, and W. A. Lash was re-elected president, and J. W. Fry, general manager.

AT the annual meeting of the stockholders of the Louisville, St. Louis & Texas Railway Co. the old directory was re-elected and the following officers: W. V. McCracken, president; George A. Evans, vice-president, and George H. Lamkin, secretary.

THE Elizabethton & Hodgenville Railway Co. has re-elected the following directors: Jacob Hubbard, M. B. Cutler, C. F. Krebs, T. W. Bullitt, John Echols, T. H. Hays and W. O. Harris.

THE Paris, Marshall & Sabine Pass Railroad has been sold at public auction to George W. Parrott, of Atlanta, Ga., for $16,100. The road extends from Marshall to Montvale Springs, Texas, a distance of 16 miles.

JAMES E. INGRAHAM, who has been president of the South Florida Railroad for about eleven years, has resigned.

THE Union Pacific has put into service what is said to be the heaviest eight-wheeled passenger locomotive in America. Its weight empty is 108,500 pounds, and with tender in full working order with coal and water 215,600 pounds. The locomotive is used to haul the fast mail over the continental divide, where it overcomes a grade of ninety-five feet to the mile.

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BALTIMORE, OCTOBER 14, 1892.

Notice to Advertisers.

The last forms containing advertisements are closed on Tuesday afternoon. New advertisements or changes should be received not later than Tuesday noon to ensure attention in the issue bearing date of the following Friday. Reading matter should be in our office on Wednesday, although late news can be received early Thursday morning.

REPORTS state that some gold discoveries have been made in Scott county, Arkansas, and that hundreds of people are going to the place to take up claims. This will likely end as many others, and the people will return home wiser and poorer. While there may be gold in Arkansas soil, it can be found more surely by following a plow and raising a good crop than by any other means.

IT is unfortunate that nothing of value has resulted from the tests of ramie decorticators at the Audubon Park experiment station in Louisiana. The months allowed for preparations afforded ample time for all intending competitors to make the needed arrangements, and from the widespread and repeated announcements of the event it was expected that the occasion would be fruitful in valuable results. Only three machines, however, were entered for competition, and the lack of suitable material for the operations of the machines brought the trials to naught. This is greatly to be regretted, and it is to be hoped that there will be another trial under more favorable conditions.

THE *United States Investor* has announced three prizes of $500, $300 and $200, respectively, for the three best essays on any American city or town. The essay is to deal with the particular merits of any place, whether from its desirability as a place of residence, for investment, of rapid growth, as possessing great undeveloped resources, or any other claim to interest or special distinction. Hon. Henry Cabot Lodge, of Massachusetts; Hon. Henry F. Crisp, of Georgia, and Hon. Julius C. Burrows, of Michigan, will act as judges in awarding the prizes. Each essay is not to exceed one column in length, and will be judged according to its literary merits as well as those of the town or city described.

IN his July report Consul Pugh, of Palermo, states that the largest of the Sicilian exports is that of oranges and lemons, amounting during 1890 to $3,353,636. Of this 1,979,235 boxes were exported to the United States, and the value of the boxes alone was more than $300,000. The importance of the immense number of boxes used in the trade consists in the fact that there is no suitable timber for making them in Sicily, and a large percentage of the boxes are made of shooks from the United States. It is suggested that, with some attention to the best kinds of timber, as well as to the most convenient condition for the rapid and simple construction of these boxes, the entire trade, amounting to about $500,000 annually, could easily be placed in the hands of American timber dealers and manufacturers.

A Good Showing.

The recent report of the finance committee of the city council of Atlanta, Ga., reflects great credit upon the management of the city's affairs. During the year 1892 the total real estate in the city is valued at $36,502,618 and the personal property $14,405,332, a total of $50,907,950. The income for the year is $2,705,592.21, and the expenditures $2,677,391.70, leaving a balance of $28,200.51 in favor of the city.

This seems much in line with the general good condition of financial matters in Georgia, the report of the comptroller-general upon the financial condition of the State for the year ending September 30, showing the total revenues, including balance on hand at the beginning of the year, to be $3,876,840.04, and total disbursements $3,128,788.41, leaving a balance in the treasury of $748,051.63. Not only is this an excellent showing, but it also is an increase of $17,111.67 over the balance of the previous year.

Florida Oranges to England.

It is announced that the first shipment of Florida oranges to England will be on November 15 from the port of Fernandina, Fla. Col. E. L. Goodsell, of New York, under whose auspices the shipment will be made, has written a circular letter to Florida orange-growers, giving directions as to packing and shipping to port. The total freight charge from Fernandina to England will be ninety-five cents per box—this, insurance, commission, selling and all other expenses. Upon arrival in England the oranges will be sold at auction in London, Hull or Liverpool, according to the state of the market at these points. The results of the sale will be cabled to Colonel Goodsell, and three weeks after the steamer's departure the net amount due the growers will be placed in their hands. A representative of the growers is to accompany the steamer at the expense of the transporters.

It is to be hoped that Florida orange-growers will take advantage of this opportunity. We have several times pointed out the manifest advantage in securing the English market for this and other produce, thus taking the pressure off the home market and preventing an overstock.

Prosperity Is With Us.

We commend this view of the business situation to our readers, particularly the few among them who are crying hard times and doing their best to make times hard:

A careful and thoughtful review of the situation inclines us to the opinion that this country has before it the promise of a most prosperous era. Our judgment is based upon the following reasons:

1. We have passed through a period of liquidation which has weeded out weak and unprofitable enterprises.

2. The minimum of failures and bankruptcies has been apparently reached, as proved by statistics, which show a large reduction both in the number of failures and in habilities.

3. After two years of liquidation and depression this country stands to-day in a good and healthy condition financially and commercially.

4. Our currency problem promises to be less threatening, as it is believed the silver act of 1890 will be repealed and that a more consistent and conservative policy will be pursued.

5. The iron trade gives promise of improvement, and, while prices are low, the demand is good, and the consumption shows a continual increase.

6. While the cotton crop is probably 1,000,000 or more bales smaller than last year, the price realized for the crop promises to produce a greater amount than was realized for the phenomenal yield of last year. This is very important to the South and Southern industries.

7. Values and prices are very low.

8. Our factories, foundries, machine shops and all manufacturing enterprises are actively and profitably engaged in producing from the raw material the finished products, which in many instances cannot be furnished in proportion to the demand.

These views are set forth in the last weekly letter of the banking-house of Hambleton & Co., of this city. They are worth reading twice and remembering, because they are facts, not theories.

Desulphurizing Pig Iron.

At the last meeting of the British Iron and Steel Institute in Liverpool Mr. E. H. Saniter read an interesting paper giving the results of a series of experiments in desulphurizing and desiliconizing pig iron prior to treatment in either Bessemer or open-hearth converters. His results, while not conclusive, are of particular interest to the South in suggesting a possible means of overcoming these two difficulties which stand in the way of making steel from Southern iron.

The process consisted essentially in taking dried and powdered calcium chloride, mixing with a certain proportion of lime and placing this in the bottom of a ladle. The molten iron is run into this ladle either direct from the furnace or from a cupola, and the mixed chloride of calcium and lime, previously fused by the heat of the ladle, rises through the metal, removing part of both silicon and sulphur. In the experiments quoted the sulphur was reduced from .22 to .06 in No. 5 hematite pig, and from .197 to .072 in basic pig, the average of a large number of trials showing a reduction of 73.6 per cent. of the sulphur. With silicon the trials were less satisfactory, the reduction being 1.6 to 1.2, 2.2 to 1.6, .56 to .32 and .37 to .09 in various cases, the average showing a reduction of 35.77 per cent. About twenty-five pounds calcium chloride and an equal amount of lime were required for a 4-ton ladle of iron.

In some respects this process is similar to that tried by Mr. Talbott at the Roane mill in Chattanooga, the difference being that he used, so far as can be ascertained, only the extremely basic slag from his open hearth converters. Mr. Saniter tried lime alone and found that while both sulphur and a portion of the silicon could be removed, it required a very long time and was uncertain. It is difficult to see exactly what chemical action the calcium chloride has in this case, as the resultant slag contains 39.1 per cent. of it, showing little, if any, loss. The actual results accomplished are, however, satisfactory, and should lead to further experimenting in this direction.

The Interstate Road Congress.

On November 14th the Southern Interstate Road Congress will meet in Memphis, Tenn., for the purpose of discussing the best systems of constructing and maintaining good country roads. A number of valuable papers on the subject have been announced, and there is little doubt but that the meeting will be a most instructive one.

Memphis is an excellent place for this meeting, as it will enable those interested in roads to see the conditions which must be encountered in the heavy clays and loam of the Mississippi valley. Stone and gravel cannot be had except at considerable expense, and if a means can be suggested for making a good dirt road out of the material on hand it will prove a great boon to the people in the city and surrounding country. Some of the roads leading from Memphis are admirably kept up with gravel, notably the Raleigh, Hernando, Horn Lake and one or two others, but the expense is considerable, as all gravel used must come fifty miles or more by railroad. What is needed in West Tennessee, Arkansas and Mississippi, where stone is not available, is thoroughly good clay roads, and this subject is recommended to the attention of the convention.

It is proposed at this meeting to have present representatives of all States in the Union and form a national association, the object of which will be to distribute information concerning the construction of good roads and to make a united effort to secure legislative action on the subject. The success of this organization is much to be desired. Every State in the country should have better roads, and the only way to secure them is to persistently hammer into the legislators the importance of the subject and necessity for action.

With the subject of good roads comes another of equal importance—good county bridges. Just a few days ago the Davidson County Court, meeting at Nashville, Tenn., refused to purchase a road roller on the ground that they had already spent so much money, year after year, in repairing their county bridges, that they were unwilling to purchase such a heavy machine, as it would undoubtedly greatly damage the bridges it passed over, if it got over at all. Iron bridges have largely taken the place of wooden ones, and should entirely replace them. The first cost is not much greater and the repair account almost nothing. This subject, with the most desirable carrying capacity and construction of the bridge, would be of interest at the meeting in connection with road matters.

CORRESPONDENCE

Institute of Mining Engineers.

READING, PA., October 12.

The Schuylkill valley meeting of the American Institute of Mining Engineers held its first session last evening in the Neversink Mountain Hotel, which stands on the mountain top overlooking the city of Reading. An electric railroad, starting from the centre of the city, winds around the side of the mountain, and by a sharp rise, several switchbacks and a circuitous route, runs almost to the hotel doors. The view from the house is grand, embracing a bird's-eye glance at Reading and a broad sweep of the beautiful Schuylkill valley. The attendance at the first session was unusually large, accountable largely by the strength of the institute in this vicinity. Fully 120 members were here last night, and there have been many arrivals since.

Mr. Jerome L. Boyer, chairman of the local committee of arrangements, introduced Mr. John F. Daniels, vice-president of the Reading Board of Trade, who warmly welcomed the visitors and gave them some striking statistical proofs of the industrial importance of Reading. Mr. Henry S. Eckert spoke in behalf of the citizens of Reading, and referred to the increasing importance of the institute and the science it represents.

The address of President John Birkinbine dealt entirely with the industrial history of the Schuylkill valley, a region that has figured prominently in the American iron industry for a century and a-half.

Two papers were read at the first session, one on the Brown segmental wire gun by N. B. Wittman, of Birdsboro, Pa.; the other on the work of the United States Geological Survey by W. J. McGee, of Washington.

The session this morning was devoted to the reading and discussion of three very interesting papers. Frank A. Hill, of Dunbar, Pa., gave an extended account of the terrible fire in the Hill Farm Parrish mine two years ago, by which thirty-one miners lost their lives. The origin of this fire was of a character rarely encountered. A bore hole which was sunk to carry a stream pipe to the foot of the slope tapped some gas in an intermediate coal seam. This gas was fired by a naked lamp in the slope. A brattice ignited the flames, fired a trip of mine cars and then the steam-dried timbering of the slope was fired. It was not until last spring that the fire was subdued and the mine recovered, and this was accomplished only by bold and skillful fighting of the fire down the slope step by step. Mr. Hill said that he was convinced that there was no explosion in the mine, and that the men were killed by wood smoke. Very little coal was burned, as the surface was closed to shut off the air.

Mr. Joseph Hartshorne, of Pottstown, presented a careful and very complete description of the basic-Bessemer steel plant of the Pottstown Iron Co., which is of much interest as being the first of its kind in this country, and one of the most complete in the world. A visit to this plant is a feature of the programme for to-morrow. Mr. J. H. Carpenter gave an informal talk about crucible steel in general, and the product of the Carpenter Steel Co., of this city, in particular. A visit to the works of his company this afternoon gave the members of the institute an excellent opportunity to witness the various stages of the manufacture of cast steel projectiles. A heat of steel was poured from the crucibles. The forging of heavy projectiles was seen and the machine shop was visited, where about thirty lathes were in use in turning and finishing shells ranging from fifty to 500 pounds in weight. The rolling mill of Cofrode & Taylor was also visited. This is a newly remodeled plant devoted to the manufacture of structural shapes. Its equipment is complete and its capacity greatly enlarged. The last place visited was the pipe mills of the Reading Iron Co., where the interesting operations of the manufacture of butt and lap-welded iron pipe was witnessed. This is the largest pipe mill in the East, making all sizes up to twelve inches. The institute will spend to-morrow at Pottstown and Birdsboro, returning for an evening session here. On Friday the Schuylkill anthracite coal fields will be visited at Shenandoah, Mahanoy City and other points. Among the papers of general interest which are on the programme are the following: "The Mesabi Iron Range," by Horace V. Winchell, Minneapolis, Minn.; "The Grading of Pig Iron," by E. T. Clymer, Allentown, Pa.; "The Occurrence of Grahamite in Texas," by E. T. Dumble, Austin, Texas; "The Rock Drill Applied to Opening the Tapping Hole of a Blast Furnace," by David Baker, Sparrow's Point, Md.; "Notes on Rescreening Anthracite Culm Banks," by Arthur W. Sheafer, Pottsville, Pa.; "Manganese Steel," by Henry M. Howe, Boston, Mass.; "The Mesabi Iron Range," by C. F. Howe, Duluth, Minn.; "The Hugh Kennedy Hot Blast Stoves," by W. C. Coffin, Pittsburg, Pa. E. H. S.

As We See Ourselves in Rocky Mount.

ROCKY MOUNT, N. C., October 10.

Editor Manufacturers' Record:

To see ourselves as others see us is generally conceded to be an almost impossible thing, and we truly find it hard to prove an exception to the couplet, for try as we may, our old town (as we affectionately call her, although really in the "heyday of youth" instead of in the "sear and yellow leaf"), has developed such an amazing amount of vitality and vim that we are obliged to reform our easy ways and hustle to keep her in sight; for not content with calling into life the latent energies and resources she possesses in her own right; earnestly striving for the proper place allotted to her—first in the ranks—she has attracted and enlisted under her banner some of the most energetic and brainy men from other States, who combine with our own tried and true and form a united band that is determined to keep her moving. Fortunately for the future growth of our town, the ones most interested in the development of the place are young and active business men who do not know the meaning of the word fail.

The other day a start was made on a fresh tour of inspection, commencing with the immense cotton mills at the falls, which, with its numerous cottages for workmen, looks quite like a factory town. The plant consists of the large old building still in use, and an immense new brick structure supplied with the latest improvements of all kinds, while all the necessary offices, storage-houses and side-tracks are conveniently near. An immense force of workmen is now busy adding an extensive addition to the present plant, with a large engine-room attached, which when completed will give them steam power in connection with the water power now in use. The warps and yarns made here are considered by experts to be among the best made in the South. The present capital is $250,000, which is soon to be increased to $500,000. The stock is now held at $170, which is 20 per cent. above par.

We next arrive at "Tobaccotown," situated at the north end of Railroad street, and so called because here are clustered three mammoth warehouses and fourteen leaf factories. The present tobacco season promises well. During the past week the sales amounted to $25,000. The second annual tobacco exposition will be held here November 2, and doubtless will surpass the very successful one held here last December. It would take too much space to mention all the prominent men connected with this great tobacco industry. Suffice it to say that all of them are alive to the importance of making this not only the leading tobacco town of Eastern Carolina, but of the Southern States. "Queen City of the Golden Leaf Tobacco Belt"—long may she deserve the title.

On the east side of the Atlantic Coast Line Railroad, as you approach the town from the north, is situated a portion of the immense tract of land recently purchased by the Rocky Mount Improvement & Manufacturing Co. This beautifully situated tract of land is well drained, has high, healthy residence lots located in and near the town on wide avenues which extend to Riverside Park, and business lots which are especially valuable for manufacturing purposes owing to the nearness and accessibility to transportation. The faith in Rocky Mount's present and future growth was clearly demonstrated by the large number of lots sold by this company at its grand auction sale on the 15th of last June. A second sale will be held on November 3d and 4th. Besides the immense leaf factories already erected, contracts have already been let for the erection of nine dwellings on their property.

The members of this company are all residents of Pennsylvania, with J. H. Logan, of Pittsburg, as manager. They have for their agents here Messrs. Arrington & Arrington, two of our brightest young business men, and for whom we predict great financial success.

The Bank of Rocky Mount occupies a prominent place in the development of the town. Organized in 1889 with a capital of $25,000, its last statement showed a capital of $35,000, with a surplus and undivided profits of $18,500. Its success proves that it is in the hands of able and efficient managers, as follows: T. H. Battle, president; L. F. Tilery, cashier, and J. G. Snyder, teller. We consider ourselves very fortunate in having the great Atlantic Coast Line Railroad to establish the largest and most complete shops and yards in the United States. Fully 100 acres of land will be required for its use, fifty acres of which will be used for the great classification yards of this system. On November 15 this will be made the relay station and terminal point of the northern and southern divisions of the Atlantic Coast Line system, and a corps of train dispatchers will be stationed here. This is also the terminal of the Norfolk & Carolina Railroad and Springhope division.

The newspapers of the place, the *Argonaut* and *Phœnix*, have contributed in no small degree to the present growth of the town.

With a mild and genial climate, good religious, educational and social advantages; with excellent dairies, vineyards, fruit farms, etc., near us, and surrounded with the best of agricultural and timber lands, are you surprised that we ask you to locate among us and reap some of the benefits? There will be reduced rates on all railroads on November 1st to the 6th for the big land sale. Suppose you come then and see for yourself. T.

A Growing Texas Town.

LA FAYETTE, TEXAS, October 7.

Editor Manufacturers' Record:

La Fayette, Upshur county, Texas, whose sources of wealth in iron ores, shales, mineral points and timber are practically inexhaustible, is forging to the front. Signs of prosperity are everywhere visible. Thirty-five new structures, just completed and in course of erection, point with certainty to a prosperous future. Among the business houses already finished may be mentioned the building occupied by the La Fayette *Iron Record*, a hotel, the wood and machine shop of James Sewell and the dry goods and grocery houses of Sewell, Lindsay & Co., Connor & Chambers and Howell & Mayfield. The drug store of Gregory & Keeling is almost ready for occupancy, and six other business houses are nearing completion. Many new residences have been finished and others are in course of construction. A corps of engineers is now in the field locating permanently a railroad from here to a connection with the St. Louis Southwestern. LONE STAR.

The Nantahala Marble & Talc Co.

ATLANTA, GA., October 8.

Editor Manufacturers' Record:

I notice your very kindly and generous notice of Nantahala in the MANUFACTURERS' RECORD of the 7th. While hundreds of Georgia's best citizens are stockholders in Nantahala, the proposed town of Nantahala is not in Georgia, but in North Carolina. It is not laid off, but the engineer is going ahead with the work now. Neither has he made the survey of an electric line to the mountain tops, but has only made preliminary examination for the purpose of making a survey as soon as he is through with other work.

There have been so many false claims made for new towns that I want us to avoid it in reference to Nantahala if possible, and will be greatly obliged if you will correct the statement in your notice of the 7th, "that the town is laid off, or that the surveys have been made," but let the world understand that we are at work and propose to do it before we quit.

A. J. MCBRIDE.

It Depends on Hogg.

VICTORIA, TEXAS, September 26.

Editor Manufacturers' Record:

I can only give it as my opinion that work on the Pan-American Railway will be resumed by the first of December, provided that Hogg is not re-elected governor of Texas. The reorganization has been completed and the money to build the road can easily be found if political matters are favorable. J. M. BROWNSON,

Treas. Pan-American Railway Co.

Decreased Pig Iron Stocks.

The American Iron and Steel Association reports that complete returns from the manufacturers of the stocks of unsold pig iron in their hands or in the hands of their agents on the 30th of September last and not intended for their own consumption show a total of 691,468 net tons, as compared with 826,500 tons on June 30, 804,808 tons on March 31 and 667,893 tons on January 1, 1892.

As compared with the stocks of unsold pig iron on hand on June 30, 1892, there is seen to have been a decrease at the end of September of 135,032 net tons. The decrease is in all of the three divisions of the pig iron trade according to the fuel used, the decrease in bituminous (chiefly coke) being 61,253 net tons in anthracite (chiefly mixed anthracite and coke) 45,713 tons, and in charcoal 28,066 tons.

In addition to the stocks of unsold pig iron in the hands of the makers or their agents at the four periods mentioned there were also in the yards of the Storage Warrant Co., and no longer under the control of the manufacturers, 39,256 net tons on September 30, 42,457 tons on June 30, 45,942 tons on March 31 and 34,608 tons on January 1, 1892.

In regard to the furnaces in and out of blast the returns show 240 stacks blowing on September 30, a decrease of sixteen as compared with the reports on June 30.

A DISPATCH from Luray, Va., referring to the tannery of Messrs. Deford & Co., of Baltimore, at that place, states that 25,000 cords of bark, representing an outlay of $200,000, are now under shelter. This bark was all obtained from the Blue Ridge mountains, and will suffice the company for one year. The tannery gives employment to 250 men, and its monthly payments amount to $9,000.

MECHANICAL.

Peculiar Crank Effects.

By Albert D. Pentz.

The thing in machinery that interests most persons is that it moves and acts, and in this particular it is different from all other arts or manufactures. Every person is interested in machinery so far as he understands it. More people are interested in it than in any other one class of manufactured things, and those who are most familiar with it most admire it.

Those who are professionally interested in machinery never tire of it; they always

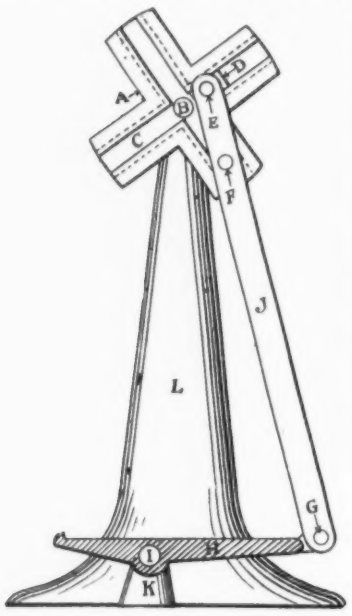


FIG. 1.

are awake when it is being discussed and alert in the presence of novelties relating to their trade. A few weeks ago, in going to New York on the Pennsylvania Railroad, it was noticed that the gait was very fast. As we passed through Harrison a Delaware & Lackawanna train was seen about 500 feet ahead doing its best. These two roads for a few miles run alongside of each other, and many very interesting races occur there. Our train, however, moved up upon the other with great celerity and passed it as such had never been seen before. This was remarkable, because the train on the other road had two cars fewer than ours.

When we arrived in Jersey City the locomotive was in a moment surrounded by about twenty men. Then I learned it was a new compound engine, and that these men were engineers who ran engines on other roads. They were all there, however, as individuals, and not as a delegation. Further, this had been going on for a week, and all the time the engine was in Jersey City she was the object of interest to those who spent their lives on such machines. Why? Because she went farther and faster with less coal than any other engine they knew of. One engineer talked with was from Buffalo, who took a day off to see the new engine.

All machine people are similarly interested in their specialties. Whatever is new attracts them at once, and if it be good as well they will study it in all its bearings, so as to be able to add it to their practice.

This article will deal with some peculiar motions of the character of the crank, a device that converts rotary and reciprocating movements the one into the other. The writer will give his experience with these movements, together with his judgment of them, based on his general experience with other devices more often used.

In Fig. 1 the trammel-cross A is mounted on the shaft B, which shaft is free to rotate within the stock L. The trams or guides C are T slots at right angles to each other and intersecting at the shaft B. In each of these guide-slots there is fitted a free sliding block as D, and each of these blocks has journal studs, E and F, sufficiently long to extend through the rod J. Any means, such as nuts and washers, may be had to secure the rod J to place on these studs, E and F, but such means are not shown because the view would be obscured.

The pedal H shown in section is pivoted on the rod I, which is mounted in two stands; one is shown and marked K. To this pedal the lower end of the rod J is attached by the stud G. This heel and toe pedal was probably invented by Isaac M. Singer, the great sewing machine man, but he did not at the time know that he had made a great invention in this item. He contrived a kind of packing-box for his first machines in which he sent them to his agents, and which, when unpacked, served as the stands and tables for the machines. The pedals of these stands were pine boards, and the pivots were strap door-hinges fastened beneath their middle so that both the heel and toe could act.

Orlando B. Potter then was president of the Grover & Baker Company, and if I remember rightly, also president and originator of that first great trust, "The Sewing Machine Combination." Singer had used this device more than two years, when Mr. Potter one day entered Mr. Singer's office, grasped his hand and thanked him with great circumstance and warmth.

"What's all this for?" said Singer.

"That heel and toe treadle."

"Well, what of it?"

"We shall use them now, as you have not patented them."

"What do you mean?"

"You've used it two years and a good deal more. I've been looking for your patent on it so as to buy the right to use it. I can't find that you've patented it, neither can I find that it was ever used till you made it," said Mr. Potter.

"Do you mean to say that I'm such a —! —! —! —! fool as to invent a thing that would have given me the say in the whole —! —! business and not know it? Look here, Potter, I've laid awake and studied, and gone to sleep and dreamed of something that would give me the control like that would have done, and now to think that I had it all the time and didn't know it. I'm a bigger fool even than I thought I was," said Mr. Singer.

Before we get away from Singer let me tell one more little story. He spent his

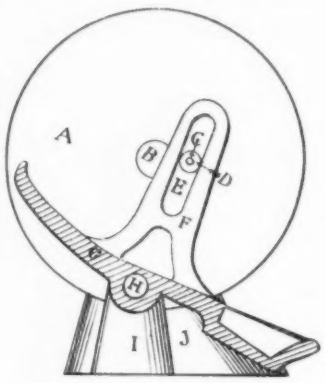


FIG. 2.

later life on his estate in England, but he experimented on sewing machines to the end. The manager of the American factory occasionally visited him there and told him of improvements and changes in the works at Elizabethport. Once this manager, thinking to please Singer, told him that there had been a locomotive bought to haul goods about the yard from one part of the factory to another and that it had been named I. M. Singer.

"Was that your idea?"

"Yes sir."

"The engine is used to haul goods about, is it?"

"It is; yes sir."

"I appreciate the honor, sir, and I will not be outdone by any man. We have just bought a fine large jackass to haul truck and manure about the place, and by ——, sir, I'll name him after you."

In Fig. 1 the pedal H oscillates twice in both directions to one revolution of the trammel A, and produces but one-half the speed in the shaft B if operated from the pedal as it would if, instead of the trammel, the device were a simple crank. As a means to convert the reciprocating into the rotating movement this device creates too much friction and is inferior to gearing, but where two regular reciprocating thrusts

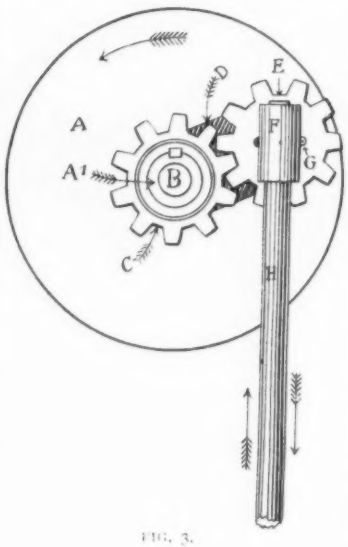


FIG. 3.

are desired to one revolution of a shaft the motion is one of the very best, and but few engineers are acquainted with it.

Fig. 2 shows a simple crank operated directly from a heel and toe treadle. The wheel A is mounted on the shaft B, which may revolve in the stock J. It has the crank stud C, which carries the roller D. The pedal G part in section is pivoted on the rod H, which is supported in two stands like I, which stands may be connected to the stock J if desirable. The driver F is of the same casting as the pedal G, and contains the slot E, which fits the roller D. This direct connection does away with the need of a connecting rod, and in the case of a sewing machine would place the band wheel down and permit a longer and slacker belt to be used, which is desirable; besides resistance to rolling is much less than sliding friction, so the resistance in the slot would be but slight. I have not tried this device experimentally, but my experience leads me to think it would be good. This device, of course, makes one revolution to one oscillation in both directions of the treadle.

Fig. 3 is the famous "sun and planet" motion of Watt, the great steam engineer. It is stated that he had invented and applied the simple crank to his first engine, but that a friend stole the idea and patented it by going quickly to London and prevented Watt from using his own invention. It must not be inferred that Watt invented the first simple crank—he did not. It probably is older than 2,000 years.

Being prevented from using this crank, he devised this substitute, which is a remarkable thing. In this construction of the device, which is modified from that of the great engineer, the wheel A is provided with a long hub A^1, and it is mounted on the shaft B. Upon the hub A^1 the arm D is fitted freely, so that it may turn independent of the wheel A. This arm D has two parallel holes through it, one of which fits the hub mentioned and the other freely fits a stem on the gear E. The gear C is keyed to the wheel A on its hub, so that the arm D is held in place, and this arm in turn holds the gears C and E in engagement in every part of their revolutions. The gear E has a lug F, a solid part of it, into which the rod H is fitted and held by the pin G.

Now, if the rod H reciprocates to and from a constant locality, as indicated by the two arrows, first, the gear E cannot turn on its stem, but the upper point will constantly remain up; second, the arm D will turn on the stem of the gear E, and also on the hub of the wheel A, one revolution to one full reciprocation of the rod H, and third, every tooth on the gear E will engage every tooth of the gear C and drive it forward the direction in which the arm rotates.

One fact not mentioned by writers generally is that the wheel A makes two revolutions to one of the arm D and to one reciprocation of the rod H.

This motion, while remarkably ingenious and instructive, has but little practical value other than as a curiosity. Suitable gearing where the pinion only is attached to the shaft will give better results cheaper.

In this series of figures, 1, 2 and 3, there are shown three cranks or equivalents giving three different speeds relative to each reciprocation of the driving rod, but in the regular ratio of ½, 1, 2.

There is in Paris, not far from the Porte Saint Martin and near the Boulevard Sebastopol, an exhibition or museum of the arts in which there are many models of machinery and of mechanical types. In this museum there is, or was, an engine which was constructed, as I remember it, with a pillow block like that in Fig. 4. Everyone does not know that the epicycloid is a straight line if described by a point on a circumference which rolls within another circumference double its length. This device is constructed on a knowledge of that fact.

The pillow block F is bored concentrically for the crank shaft and the annular gear E. The crank A is keyed to the crank shaft as usual, and it extends outward so as to carry the crank pin B, the centre of which in operation describes the circumference J. Upon this crank pin is mounted the pinion C, having one-half as many teeth as the annulus E has internal teeth to receive them. On this pinion C is bolted the driving plate D, which carries the parallel motion stud or pin G. Now, because the centre of G is precisely on the pitch line of the pinion C, its motion will be exactly in the line H I in every part of the combined rotations of the crank A and the pinion C. Hence, in the engine in Paris the piston rod is connected directly to this pin G. It is presumed that this ar-

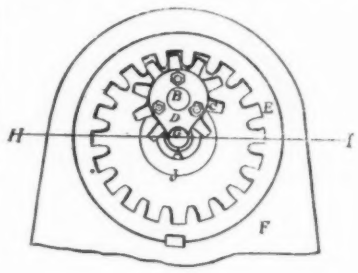


FIG. 4.

rangement would operate well if everything was in dead line and if there should be no lost motion in the gear; but if there be lost motion between the teeth of the pinion and those of the gear, the device should "pound" at the reversal, but the blow would be a light one. The difficulties in constructing this device are so great, however, that there is small likelihood of its being extensively used for engines, but there is a grand principle in it which may be found to be precisely the thing some one is now looking for to accomplish an end of great importance to the arts. Yesterday one of the finest engineers in New York

told me that some years ago he wanted to do an operation in engineering, and for some months could not find the mechanical means he sought to accomplish his end. At last, when he had almost given the thing up as impracticable, and, in fact, was engaged on another thing, he saw exactly the mechanism he needed in a little shop in an obscure town in Massachusetts.

There is, or was, an engine in the Paris mint that operated its valve by an eccentric crank pin like that in Fig. 5. This engine did not connect quite as shown, but instead the eccentric operated within a

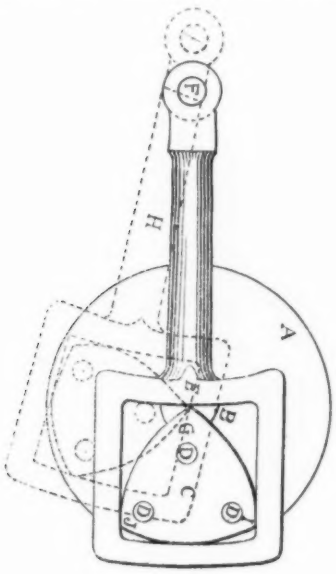


FIG. 5.

yoke, which was a part of the valve rod. This yoke had two faces at right angles to the thrust which embraced the eccentric and which had contact at no other points. The valve rod was held in guides so that it reciprocated only in one direct line. In the construction here shown the flange A is mounted on the shaft B, and the eccentric C is fastened to this flange by the bolts D, so that the centre G is placed precisely upon the centre of rotation. The "strap" E embraces the eccentric C by four sides in two parallel pairs. By this arrangement the eccentric fills the strap at every degree of revolution, because it has a constant diameter through the three centres G, I, J, from which its three arcs are described. During sixty degrees of the revolution of the flange A the strap E is at rest in so far as it does not throw the point F to any new position. Then in 120 degrees it is thrown to its other extreme position, where it rests in sixty degrees, and returns to its first point in the 120 remaining degrees. The dotted lines H on the figure show the strap and eccentric in an intermediate position. The curved faces within the strap are circular arcs from the centre F, and they are so formed that the point F shall remain at rest the prescribed time.

Now, this variety of eccentric has come within my practice very largely, and I have found various modifications of it to have great mechanical value. The precise form here shown will not wear well on the extreme points, but these points may be rounded to any degree and still preserve all the benefits of the eccentric. It is a modification of this eccentric that gives the means by which a square hole may be drilled in metal, and such generally is used as the feed motor in sewing machines. When this eccentric was first used in France is not known, but it was first used in this country to my knowledge before 1860.

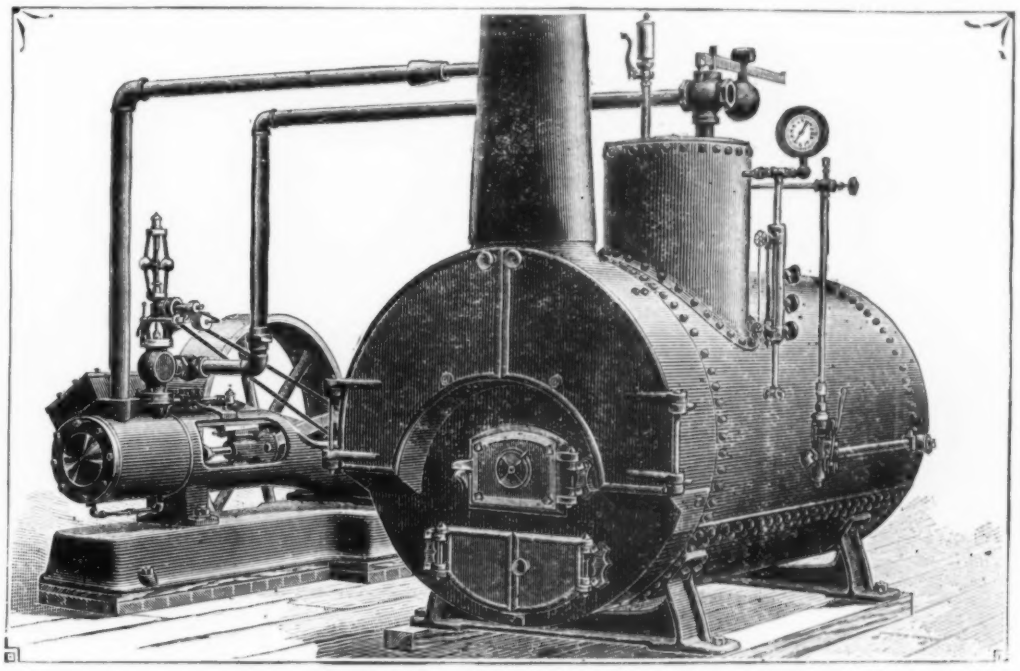
The Racine Automatic Engine.

The illustration presented herewith shows the new horizontal engine built by the Racine Hardware Manufacturing Co., of Racine, Wis., who until recently confined themselves to the producing of vertical stationary and marine engines of a high grade. The company believes in the vertical type wherever it can be used, and especially in their own engines, claiming that the maximum of power in the minimum of space, the best balanced, the best wearing and the best thrust-sustaining qualities are combined in them. This company probably carries the largest stock of engines of any builders in the country, with a view to the immediate filling of orders. At this writing they have by actual count 174 steam engines complete on the floor or in process. As they make thirty different numbers, they find such stock-carrying necessary.

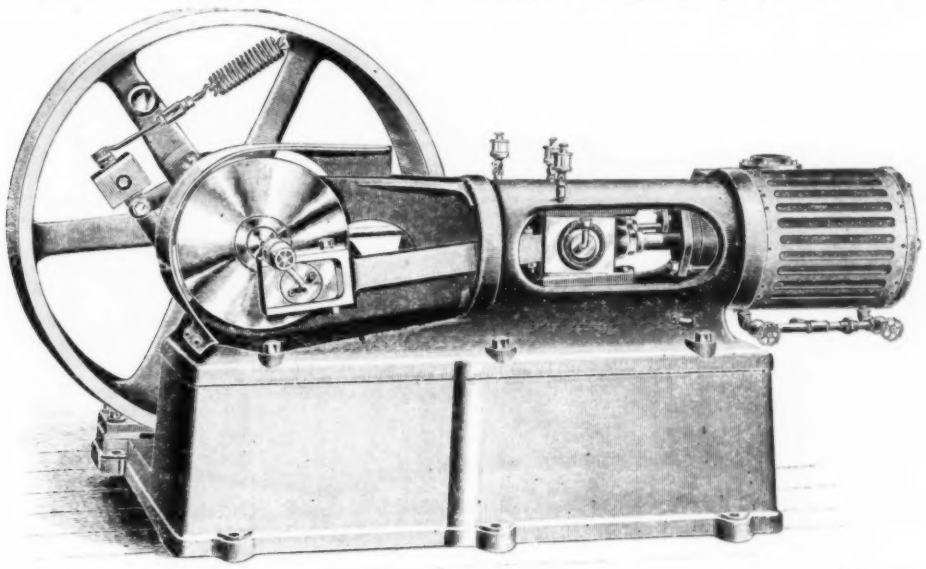
It is well understood by intelligent men that where fuel costs anything no one can afford to use any other than an automatic engine which takes just as much steam as is necessary to move its load and no more. Steam represents fuel; fuel represents money. In these days of locating power in basements there are places where the height of a vertical engine are objectionable. This has induced the Racine Company to commence building a line of horizontal engines from 35 to 100 horse-power, in which they embody all that their long experience has proved to be the best. They are what may be called reasonably high speed, which means economy, while extreme speed may mean waste.

The engines are built to stand all the stress that their highest ratings demand, with broad margins for safety. It has come to be understood in engine construction that quality and not quantity of material should govern, which means the best material in the right place. The day has passed for estimating the value of an engine by the amount of pig iron put into them. It will be noticed in deciding what type of engine to embody in this their latest they have followed what is rapidly coming to be the conviction of practical mechanics and users of power (and at a considerable increase of cost) in supplying an outer support for their power wheels. Years ago this concern commenced building engines without outbearings, but after costly experimenting and years of experience they have decided that an outbearing is necessary to the life of an engine, thus securing what cannot be secured otherwise—the least wear and uniform wear, the least time lost in repairs and the least cost of repairs.

It needs no argument to prove that a self-contained engine saves much cost in the setting, but there is not a full appreciation of the safety it secures against the shaft getting out of line from unsettling of foundation or other causes, with all the expense incident to such repairs. The success this company has met with and the large number of engines they have in operation throughout the country is an excellent testimonial for the Racine automatic engine.



CENTRE CRANK ENGINE AND CORNISH BOILER.



THE RACINE AUTOMATIC ENGINE.

Centre Crank Engine and Cornish Boiler.

The engine and boiler represented in accompanying illustration are built by the well-known manufacturing firm, James Leffel & Co., Springfield, Ohio. Thirty years continuous business devoted exclusively to the building of steam engines and boilers and the James Leffel turbine water-wheels has given this firm an established reputation and record for good honest work and satisfactory service.

Their horizontal engine, shown in accompanying cut, is of the centre crank pattern, carefully designed with regard to form and proper distribution of metal as to secure greatest strength and durability and highest symmetry of parts. The main bed or frame is cast in one piece, including guides for cross-head and extra large babbitted bearings for main shaft. The cylinder is cast separately of selected metal, and firmly bolted to end of main frame. The crank-shaft is of solid steel, of extra tough and homogeneous quality and counterbalanced. The cross-head is of superior mechanical design, and fitted with composition slides above and below, each adjustable with gib bolts, affording specially convenient arrangement for taking up wear. Extra care is bestowed on the piston, which is provided with self-adjusting metallic rings, after most approved practice. The governor is of best make, with speed adjuster, sawyer's lever and automatic safety stop. Each engine is carefully run and

tested under steam before leaving factory.

As will be seen, the boiler is of the Cornish return tubular pattern, the same style as is almost universally used on ocean steamers, which is a positive guarantee of their safety and efficiency. It is thoroughly well built throughout of open-hearth homogeneous steel plate of 60,000 pounds tensile strength, and furnished with best quality lap-welded tubes. The fire-box consists of a large cylindrical flue extending full length of boiler, encased within the outside shell and surrounded with water. In the front end are placed the grates or furnace proper, with bridge wall at the back end of the grates, beyond which is a combustion chamber leading to the tubes, through which the flames and heated gases are returned to the fire front end and pass into the stack after having traversed the full length of boiler twice. The opening of the fire door does not expose the ends of tubes to the inrush of cold air, so detrimental in some other styles of portable boilers. The smoke bonnet is provided with double-hinged doors, affording convenient and direct access to flues for cleaning or examination. These boilers are not only very compact, but also economical in the use of fuel and specially free from sparks. Each boiler is thoroughly tested under cold-water pressure, also under full steam pressure, before being sent out.

This company also builds a line of small upright engines with submerged tubular steel boilers. A fine illustrated pamphlet giving description in detail, with any further information desired, is cheerfully furnished on application to James Leffel & Co., Springfield, Ohio, or No. 110 Liberty street, New York city.

Ancient Texas-Made Machinery.

James J. M. Smith, of Burnet, Texas, writes to the Galveston *News* as follows about the record of an old Texas engine:

"I recently reset on a granite foundation, capped with a marble slab, a stationary engine made by 'Close & Cushman, Galveston, Texas, 1855.' This engine is in the Burnet flour, grist and cotton gin doing good service. I reset this engine in 1879, and the wear on the cylinder, which had not been bored out in several years, was only a fraction over one-sixty-fourth of an inch. The wear since 1879 shows only one-and-one-half-sixty-fourths of an inch. The size is now twelve and three-eighths diameter of cylinder by fourteen inches, and makes 140 revolutions per minute with about fifty pounds pressure of steam, being nominally thirty horse-power. The high character of the iron used in the cylinder and honest construction of the same are certainly commendable for the builders. It has proven after thirty-seven years of trial that a Texas-made engine is not to be sneezed at."

A Large Gasoline Engine.

The gasoline engine now in operation at Taylor Bros.' grain elevator in Camden, N. J., is of unusual size for engines of this class, and its excellent performance reflects much credit upon the makers, H. W. Caldwell & Son, of Chicago. The engine covers a space seven by twelve feet, and is run with gasoline drawn from a tank placed at some distance and below it. The amount flowing into the cylinder is accurately measured by a governor and ignited by a small flame inside the chamber. Seventy-five horse-power is developed, and by means of heavy fly-wheels the motion is kept smooth and steady. The average consumption of gasoline is about three-fourths of a gallon per horse-power per ten hours, or an expense of about three-quarters of one cent per horse-power per hour.

M. V. HENRY, of Birmingham, Ala., on the 5th inst. secured a $100,000 contract for government work on the Mississippi river between Memphis and Vicksburg.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

THE Mexican Gulf Hotel at Pass Christian, La., has been sold to J. T. McGinn and a Mr. Day, of Chicago, Ill. $52,000 was the amount paid. It is the intention of the owners to refit the hotel and make it a winter resort for Chicago people.

THE St. Louis Cotton Exchange has asked the co-operation of the exchange in New Orleans to fight against the Hatch anti-option bill. The latter exchange has replied that if the St. Louis exchange carries out its proposed change in grading cotton, making contracts so as to make low middling the lowest cotton deliverable, they would prefer to see the option bill passed.

THE city of Raleigh, N. C., is steadily growing in size and increasing its volume of business. Its excellent climate, educational advantages, cheap and pleasant homes and its social and moral excellence make it an attractive place in which to live, and its excellent location is all that can be desired for business.

THE Wheeling (W. Va.) Ice & Storage Co. is preparing plans and specifications for a new ice and cold-storage plant which will be placed under construction at an early date and pushed to completion as rapidly as possible. The building will be of brick, three stories high, with extra heavy walls to admit of more stories in the future if found desireable. It will be provided with about twenty cooling rooms.

IT is reported that the Standard Oil Co. is considering the matter of running a pipe line from the oil fields in Ohio to Atlanta, Ga. This would give the Standard Company a Southern distributing point for oil, and necessitate the erection of more refineries at Atlanta.

ON October 12 it is proposed to hold a fair in Pensacola, Fla., at which will be exhibited the various varieties of tobacco grown in the State. Col. W. D. Chipley, of Pensacola, has the matter in hand, and buyers desirous of examining the samples to be exhibited can obtain special rates from him.

THE record of the collector of customs at Norfolk, Va., shows the following export shipments for the month of September: 3,200 bales cotton, $127,421; 6,259 tons coal, $18,950; tobacco, $71,058; 23,886 barrels flour, $129,463; 65,867 bushels wheat, $11,899; 176 head cattle, $14,080; 517 barrels rosin, $1,551; 1,000 bags bark, $1,000; 100 bushels peas, $150; 250 bushels corn; $150; 60 bundles fence, $240; 2,288 boat oars, $300; 60 tons hay, $220; logs, $23,972; staves, $21,985—total, $422,439.

THE West End Land Co., of Danville, Va., has made an assignment. It owes about $30,000, mostly in Danville. The deed authorizes the trustee to issue bonds of the company to the amount of $40,000, to be used in paying off the debts and in further developing the property.

A PUBLIC sale of lots was recently held at Moundsville, W. Va., at which some $20,000 worth of lots were disposed of. The terms were one-third cash and balance in equal payments in one and two years.

A LARGE and enthusiastic concourse of spectators were gathered on the wharves of the Florida Southern Railway at Palatka, Fla., on the 4th inst. to witness the launching of Captain Louis's new Ocklawaha river steamer, the Mora. A number of the captain's friends were invited to witness the launch, and among them a number of Palatka's beautiful ladies. Everything being arranged, Miss Rosa Darien took her position, and as the beautiful craft glided slowly into the water the young lady performed the usual ceremony and named the vessel Matta Mora. The steamer is 187 feet long, twenty-two feet beam and draws eighteen inches of water. She will be driven by an eighty-five horse-power engine.

THE board of directors of the Lucas Ship Co. held a meeting in St. Louis on October 8th and awarded to the Iowa Iron Works, of Dubuque, Iowa, the contract to build the first of the vessels of their line. The cost is to be $200,000, and of this the Iowa Iron Works take $30,000 in stock. The ship will be 230 feet long, forty feet beam, with a freight capacity of 1,000 tons on a draught of seven feet, and 1,500 tons with nine feet draught. The vessel will be of steel with an adjustable keel made like a centre-board. She will have double engines, twin screws and a speed of sixteen knots. The boat will be ready by the spring of 1893, and is to be used in freight service between St. Louis and Gulf and South American ports.

DURING the past year Winston, N. C., has handled 16,884,345 pounds of tobacco, an increase of 797,972 pounds over the preceding year. The total amount sold in the State during the past year was 67,000,000 pounds, to which should be added 20,000,000 pounds raised in North Carolina, but sold in Danville, Va., and also other sales in Richmond and Petersburg.

WORK began last Monday at Savannah, Ga., on the three $1,000,000 contracts for improvement of the river and harbor, about 200 men being employed, which is to be shortly increased to 400. About four years will be required for the work, and it will give Savannah a depth of twenty-six feet of water to the sea.

A LARGE deposit of a very pure quality of graphite, as well as an inexhaustible supply of fine grades of clays suitable for the manufacture of tiles and drainage pipe, has been discovered within a few miles of Fredericksburg, Va.

A NEW industry to be established at Harriman, Tenn., is wall-paper printing works. Messrs. P. T. Waters and D. F. Layton, of Harriman, and Carl Stolberg, of Sweden, have formed the Swedish-American Wall-Paper Manufactory, and will at once equip a plant. Mr. Stolberg is an expert in the wall-paper industry, having had an experience of thirty-five years in Europe, and the success of the enterprise is no doubt ensured by his knowledge. Additional capital and machinery will be added to the concern as the business progresses.

THE Cook Well Co. has just completed an artesian well at Canton, Miss., for the Illinois Central Railroad Co. The well is 440 feet deep and has a capacity of 200,000 gallons of water daily, an ample supply for engines, roundhouse and shops.

SOME weeks ago a description of the results of the McArthur-Forrest process for working gold and silver ores in South Africa was given in the MANUFACTURERS' RECORD. Mr. C. A. Mezger has since that time been authorized by the company holding the patents to make preliminary examinations and tests of ores in Virginia, North Carolina and South Carolina with a view to determining whether the process can be successfully used with them. If satisfactory it will serve to revive the mining industry in these States.

THE secretary of the Houston (Texas) Chamber of Commerce, Mr. H. G. Lidstone, has lately been making a tour of the State endeavoring to incite the interest of the inhabitants in county road improvements. A meeting to fully consider the matter and discuss different plans for such improvements is to be held at Houston to-day (14th instant). This subject is of considerable interest to every county in Texas, and it is to be hoped that they will each have a representation at the convention.

CONTRACT for improving the James river under the recent appropriation of $200,000 by Congress has been awarded to John A. Curtis, at Richmond, Va. Mr. Curtis will at once proceed to arrange for commencing the work about November 15.

IMPROVEMENTS at Batesville, Ark., continue steadily. The new $25,000 court-house is now well under way, and when completed will present a handsome appearance. The Arkansas College is being enlarged by the addition of a three-story brick structure. Low water has retarded the cedar business to quite an extent, but with the advent of the winter rains it will doubtless become larger than ever. The two manganese mines are being worked with a full force, and many cars of ore are shipped daily.

COTTONSEED in Texas is now selling for from $7.50 to $8.50 per ton at the railroad station. At this time last year the seed sold for from $6.50 to $7.50 per ton, so the advance in price is considerable. Hulls are worth from $3.50 to $4.00 per ton at the mill for feed. Cottonseed meal is worth about $15.50 per ton at the mill, though some few have sold their season's product at $16.50. Most of the cottonseed-oil mills in Texas will make money this year, some clearing $3.00 to $4.00 profit per ton seed. During the past three years some mills in the State have paid 20 and 30 per cent. dividends.

AN auction sale of lots will be held at Rocky Mount, N. C., on November 3 and 4. At the previous sale in June a large amount of property changed hands, and it is thought that the coming sale will be even more successful.

South Carolina's Debt.

Governor Tillman and Treasurer Bates, of South Carolina, have been in New York to confer with bankers on the subject of refunding the debt of that State. The bonds authorized to be funded in new 4 per cents are those known as the Brown consols (or Browns), redeemable July, 1893. On October 31, 1891, the amount of these bonds outstanding was $5,393,076.70. Adding the valid Green consols and 50 per cent. of old bonds and stocks (principal and interest) convertible into Browns, or $846,507.12, less $454,892.24 declared invalid, the total Brown consol debt, after the consolidation under the act of 1873 has been completed, is estimated at $5,784,691.58. This estimate includes Green consols and old bonds which, while liable to be exchanged for Brown consols, may or may not, in whole or in part, be surrendered by the holders for that purpose. The Browns issued for funding and in exchange from October 31, 1891, to October 8, 1892, amounted to only $14,915.38. There were outstanding October 31, 1891, $5,393,076.70, so that the total Browns actually outstanding on October 8 is $5,407,992.08. We have no record of any issuance since that date. The South Carolina legislature will shortly meet to act on a proposed amendment to the law so as to make the rate of interest on the funding issue 4½ instead of 4 per cent., as the plan now stands.

THE National Cordage Co. has declared the regular quarterly dividend of 2 per cent. on the preferred and 3 per cent. on the common stock of the company, payable on the first day of November next. The transfer books will close on October 15th and reopen November 2d.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 226 and 227.]

American Lumber in Europe.

[From our own Correspondent.]

PARIS, September 23.

The lumber traffic of Paris is of small magnitude. Relatively Paris is a finished city. In contrast with London or New York, house-building in this city seems at an end. Lumber is handled by very small dealers, mainly in connection with carpenters' shops and contracting firms. The pitch pine imported in France comes to Havre by whole vessel loads. That portion which is consumed in Paris is transferred at Havre to lighters and towed down the Seine by small tugs. The Seine is a small stream, and only small crafts can ascend it.

I find yellow pine is used for much of the indoor finish of public houses, such as restaurants, theatres and bar-rooms. Rich people, especially Americans, who build here are beginning to use pitch pine for indoor finish of their private homes. As already stated, the demand is light, and I do not see any tangible prospect for a decided increase. I have been told by pitch pine exporters of Florida that the reclamation demands of the French dealers are generally exorbitant and disastrous if allowed. Of course those who have tried the French market know better than I do regarding this matter, and are prepared to protect themselves accordingly, but to those who have not already shipped to France I inject this word of caution. It is well for them to bear in mind that Havre is the place where this business is transacted, and not Paris.

The present freight rate to Havre is about the same as to England, as mentioned in former letters—that is, from 90s. to 100s. per standard, which is equivalent to from $11.25 to $12.50 per thousand superficial feet.

GENOA, ITALY, September 25.

Genoa is the principal port of Italy. Here the greater bulk of the import of lumber is received for the interior consumption. While this is not great, it is perhaps worth the consideration of pitch pine shippers. There is some opening for pitch pine finishing lumber. The present freight rate from pitch pine ports to Genoa is 95s. to 100s. per standard, or from $11.50 to $12.50 per thousand feet. This rate will apply equally from Savannah, Ga., Pensacola, Fla., or Mobile, Ala., and probably from Galveston, Texas. What has been said above in regard to the French trade is true also of the Italian trade. I have been told by Pensacola dealers that the Italians do not always honor the drafts according to their contracts. Americans resident in Genoa advise me that the Italian does not expect credit from a foreign seller, and if he receives credit he feels that his confiding seller is a fool, and takes advantage of him accordingly.

For ages the Genoese merchants have been renowned for their shrewdness. Our United States consul at Genoa remarked to me with a smile that it was a standing proverb in Italy that "one shrewd Genoese was equal to six Jews" in all mercantile tilts. It is said that the Genoese merchants are able to keep their books in such a way that their business transactions are perfectly clear to themselves and at the same time defy the investigation of the most expert accountant.

The demand for pitch pine in Italy is quite limited, and as the country is poor, with an immense public debt and a poor national credit, I see little to encourage pitch pine exporters in this direction.

Our able American consul, Mr. James Fletcher, of Iowa, tells me that there is a fine market in Italy for a great number of articles of American manufacture. He cites as an instance the common American clothespin. He says our American-made pins are so superior to those in Italy that if brought in direct competition at equal prices they would of necessity monopolize the market, and that the Americans can afford to pay the Italian tariff and still make money on pins at Italian prices, and the same is true of a number of other light articles of every-day use. Hitherto the Americans have been inclined to regard Italy as a nation of beggars. While this is true only in a measure, it is equally true that it is a nation of buyers. Mr. Fletcher says that no such thing as an iron safe is known in that part of Italy, so far as he has been able to learn. He wonders that some of our American safe manufacturers do not introduce their goods into Italy; that while their profits would necessarily be less than in America, yet they would be sufficient to warrant the enterprise. The common door locks which the Italians now use are so antiquated and clumsy that their use must necessarily be discontinued if our Yale locks were once brought to the knowledge of the public. Italians who have never travelled abroad, and only a few of them have, have never seen such things as iron safes and improved door locks. Thus far the Americans have never thought it worth while to attempt to introduce them in Southern Europe. There awaits a good revenue to the pushing American manufacturer who will attempt it.

While the lumber manufacturers can expect but little from a country like Italy, the producers of light articles of every-day use will certainly find it to their interests to investigate this market. Mr. Fletcher has already been troubled unnecessarily by curious Americans who ask him a vast number of questions which they can find answered at length in our government consular reports of May 19, 1891, to be had by application to the State Department at Washington. In this publication will be found a very full and complete report of Mr. Fletcher which Americans who contemplate trying the Italian market would do well to read.

COLOGNE, GERMANY, September 28.

Germany has fixed a tariff on imported lumber from America and other countries not included in her late commercial treaty which amounts to twenty pfennigs per hundred kilogrammes. This is equal to about seventy-five cents per thousand superficial feet of lumber. This tariff was fixed to protect lumber manufactured in the Black Forest along the headwaters of the river Rhine; besides the revenue therefrom is quite convenient for a nation which supports a standing army of 1,000,000 men.

A considerable amount of pitch pine and other American woods are imported by merchants in Hamburg and Bremen. Cologne does a limited amount of lumber importation.

Our very able consul, Dr. W. D. Wamer, who has been in the service about eight years at Cologne, advises me that the demand for pitch pine for building staircases and other indoor work is growing slowly and constantly. The same obstacle extends here as elsewhere in Europe against pitch pine, viz., that pine from Scandinavian Europe is much cheaper, owing to lower freight rates. Our pitch pine can only be sold where it pushes its way in by virtue of its intrinsic merit. From all I can learn I am quite sure that there is a fair prospect for increased demand for Southern timber in the German market. The demand for oak staves along the Rhine for the making of wine barrels is considerable, which demand is chiefly supplied from Austria and partly from America. I was unable to investigate this branch of the trade to my satisfaction, and I would suggest that those concerned write Dr. Wamer at Cologne, asking him for the names of such dealers, who will inform them more fully as to details. In the consular report, already referred to in this letter, will be found that of Dr. Wamer in reference to the lumber industry, which, though brief, is accurate and trustworthy.

The freight rates to Hamburg and Bremen are about the same as to Havre and Genoa. These freight rates are only approximate and apply to the present. They fluctuate with the seasons, and one is never safe to rely upon any quotation that is not direct and that does not refer to specific dates and ports.

Dr. Wamer advises me that he has heard much complaint among German importers of yellow pine as to the quality that has been shipped them in the past. No doubt the pitch pine shipper, on the other hand, complains as bitterly of the inspection which his material has been forced to undergo when it reaches Germany. Just here is the worst stumbling-block in the path of the exporter. The buyer seems to want a better grain than the producer can produce. I see but one basis of agreement, and that is that the buyers' inspector inspect the cargo when it is loaded in the American port and that the transaction be there finally consummated. The expense of doing this would necessarily be borne wholly or in very large part by the shipper, but this would be cheaper than to honor or arbitrate the reclamations which have hitherto paralyzed the exporters' profits.

C. J. HADEN.

The Hardwoods of North Carolina.

By J. N. Ingram.

The mountain region of Western North Carolina contains many species of valuable timber. On the slopes of the ranges the trees grow to a great height and have large bodies. Their noble trunks are almost Brazilian in their proportions, many of them reaching a height of 150 and 200 feet.

The Blue Ridge is covered from the Virginia line to the South Carolina border with dense masses of forestry, and is as fine a timbered section as can be found in the United States.

For hundreds of miles the mountain sides are overgrown with chestnut trees, which tower aloft like cedars of Lebanon and form imposing areas of woodlands. So thick is the growth of the trees that the forests in many places are almost impenetrable, with dark and gloomy recesses, from whose depths the sun's rays are obscured by the density of foliage. The chestnuts are not confined to the rich levels of the valleys or the moist soil along the streams, but their hardy trunks climb the steep mountain declivities like stalwart cane brakes, and their big trunks even rise on the crests of the mountains. The leaves of the trees have in the distance a bluish tint, and in summer the heavy woods on the ranges in the clear atmosphere assume an indigo color, which gave the chains the name of the Blue Ridge.

For many years these primitive woods, untouched by the hand of man and unscarred by the woodman's axe, were regarded as pictures of beauty to give color to the landscapes and add an attraction to the scenery of the mountains. Many tourists annually came in the summer season to wander in the grand groves and admire the colossal patriarchs of the forests in this "Land of the Sky."

So varied and excellent were the character of the mountain woods that the Blue Ridge soon became famous for the quality, diversity and quantity of its fancy timbers. Timber speculators from various parts of the world came to Carolina to purchase the coveted treasures.

The lands and forests were in the hands of mountaineers, who, though living in rude cabins on the ranges and limited in their reading, were financiers after their own way and were not in a hurry to give away their timber or to sacrifice their lands. The pittances first offered by lumber dealers were ignored by the woodsmen, and transactions were neither frequent nor extensive. The highlanders were not in pressing need of funds and held on to their wood. Prices went up and sales began. The mountaineers were adverse to selling their landed belongings and moving away from their homesteads. They preferred to stay in their cabins, retain their surroundings and sell their trees. For satisfactory considerations they sold the timber standing on the ground for so much a tree. The buyers engaged hands to chop down the trees, remove the bark, and saw them into suitable lengths for shipment. Oxen were then employed to haul the great logs to the railway stations for exportation. The logs were bought and hauled thirty and forty miles over the hills to the depots.

But the landholders discovered that they were not receiving enough remuneration for their trees, and started saw mills on their streams to prepare their fine woods for market. The timber is now furnished to the trade in the form of planks. It is shipped by rail to Norfolk and sent by vessels to Baltimore, Philadelphia, New York and Boston. Boston is the largest buyer of fancy North Carolina woods. The timber is also exported in considerable quantity to Europe.

The American markets now purchase plank lumber entirely, but the foreign dealers, through their traveling agents, buy the trees in the woods and ship the logs via Hampton Roads to the old country.

The most plentiful of the fancy timbers on the Blue Ridge is the yellow poplar. These trees grow to an enormous height and have immense bodies; they indeed rival the Alaskan pines in dimensions. Some of the poplars are so large that a single tree has furnished lumber enough to build a church. So tall are the trees that their trunks often have several cuts of marketable lumber. The largest trees grow near the streams, but specimens are found in the valleys and up on the sides of the mountains.

Poplar timber is most numerous in Macon, Jackson, Cherokee, Graham, Swain, Haywood, Madison, Yancey and Mitchell counties, on the slopes and basins between the Blue Ridge and the Smoky mountains. The grain of the wood is soft and of fine texture, and in great demand for ornamental ceilings. It is also used on the mountains for building houses.

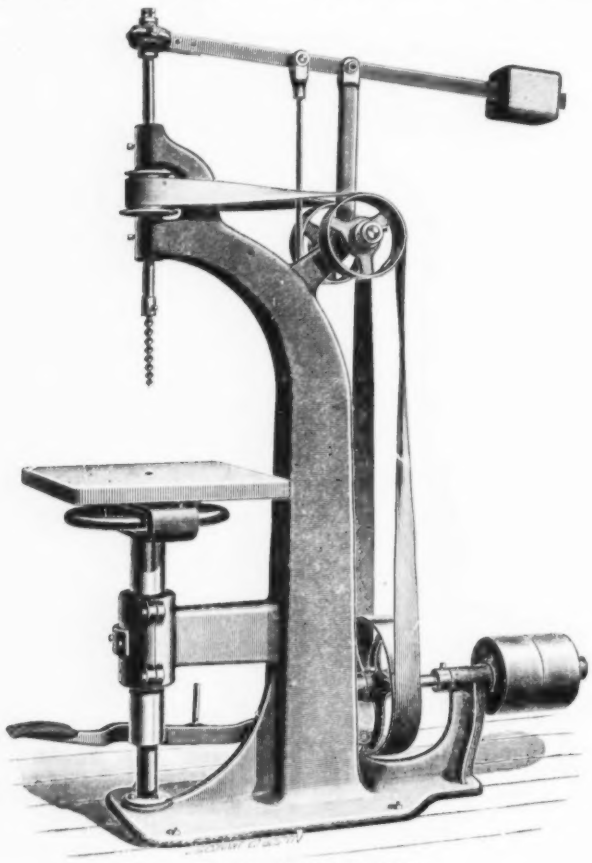
White oak is the next timber in quantity and demand. The oaks are large in size and grow in great number in several counties. It is a very hard and solid wood and receives a fine polish. It is used for doors, mantels and other building purposes. Chestnut oak is another timber which is found in large quantity, and is quite popular with builders and has an extensive sale. Black walnut is one of the finest timbers on the mountains and is seen in all the counties west of the Blue Ridge. It is a valuable wood and commands a high price. It was years ago quite plentiful on the mountains, but its great popularity and the demand for its timber have depleted the forests, and the trees are now only found in the woodland of the back counties remote from the railroad. The timber which has not been cut has mostly been sold. In Yancey and Mitchell counties over a thousand walnut trees remain standing, but are sold. The trees grow to a noble size and each produces considerable lumber. The logs are from four to six feet in diameter. The lumber is used for manufacturing fine furniture and similar work.

The curly walnut is the most valuable and costly wood in Carolina. It is found in limited quantity in all of the counties mentioned above. It commands fancy prices and is shipped long distances. Every part of the tree is sold, even to the large limbs.

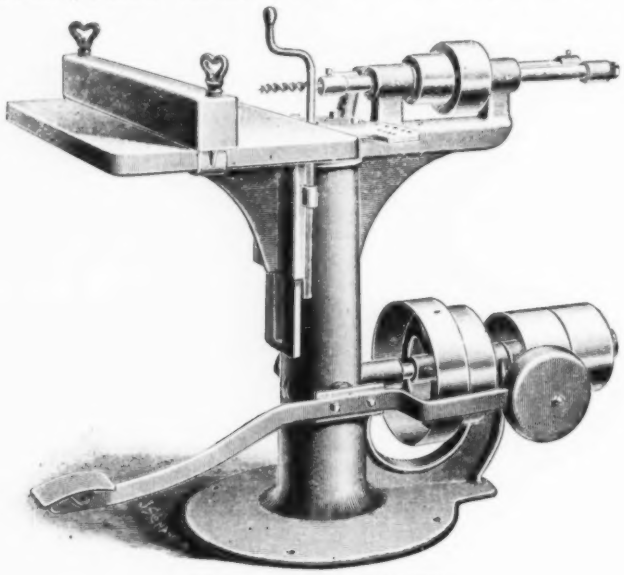
It is not, however, as plentiful as the plain black walnut, but is much more expensive. Next to the curly walnut in value and rarity comes the wild cherry tree. It is a fine and costly wood and wanted in all parts of the world. It has a firm, delicate grain of satin-like smoothness. The wood is curly, spotted and streaked, and presents many features of beauty. Large numbers of the trees are found in Cherokee, Jackson and Swain counties.

A large amount of maple timber is also found both east and west of the Blue Ridge, and in McDowell, Polk and Transylvania counties. Curly maple is also found in small quantities. The maple is a favorite lawn tree, and its golden foliage in autumn adds glory to the mountain woodlands. The timber is of very fine quality and was once in extensive demand by cabinet workmen, but public taste in latter years has changed and the wood is not so much a favorite now as formerly. Black ash also grows large in all the mountain counties, and can be had in any quantity desired. A smaller supply of white ash can also be had. The black ash is considered the most valuable, and is the most largely sold. The chestnut timber, which was years ago considered only suited for firewood, has proven to be a favorite commodity for commerce, and is an excellent wood for furniture. It is regarded now as good as ash for this use, and has a growing sale and large exports. The supply of chestnut from the mammoth forests on the Blue Ridge is almost exhaustless, and it will form a large factor in the Carolina timber trade for years to come. The introduction of narrow-gauge electric railways into the back county forests will tap the uninvaded timber regions in the mountain wilds and bring its lumber into the market and largely increase the present shipments from the State.

Washington, D. C.



VERTICAL BORING MACHINE.



HORIZONTAL BORING MACHINE.

Vertical and Horizontal Boring Machines.

We show in this issue a new line of boring machines manufactured by the John A. White Co., of Dover, N. H., which are extremely neat and compact in appearance, and are designed to meet the demands of the best class of woodworking establishments.

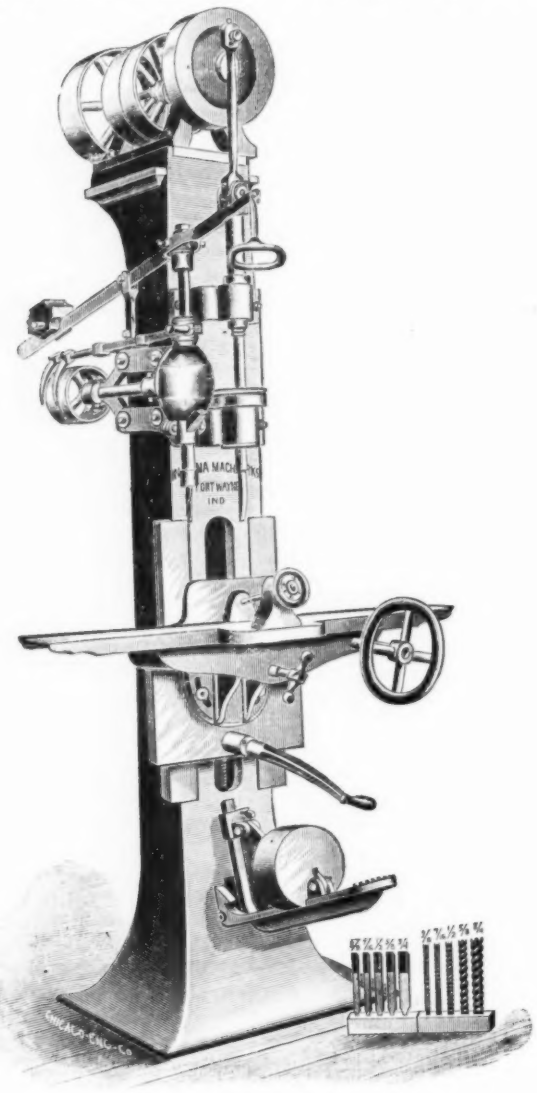
The vertical machine has a 9-inch stroke, and the bit is thirteen inches from the frame, while the table has a vertical adjustment of eleven inches.

In the horizontal machine the table has a vertical adjustment of ten inches, while the traverse of the bit is eight inches.

The combined horizontal and vertical machine unites the features of both the above, and will be found a most convenient and compact tool for general shop use.

These machines weigh 800, 600 and 900 pounds, respectively, and are shipped with a set of bits complete ready for operation.

Like all other machinery manufactured by the John A. White Co., they are built on the interchangeable plan, every part being made to gauge and numbered.



A NEW MORTISER AND BORER.

A New Mortiser and Borer.

The accompanying illustration shows a new No. 2½ mortiser with clamp table and boring attachment made by the Indiana Machine Works, of Fort Wayne, Ind. The column is cored out and cast in one piece, having a wide and substantial base. The table is fitted to dovetailways on the column, and has long bearings with adjustable gibs to compensate for wear. It is adjustable vertically for different thicknesses of stock, horizontally and laterally, convenient devices being provided to enable a speedy manipulation of the fixture; it may also be tilted to admit of angular mortising or boring.

The spindle is of large diameter, running in long bearings and is made of the best steel. The chisel reverser and stop are of cast steel. By a convenient device the chisel may be reversed the moment it leaves the work. The spindle, plunger, reversing cone and connecting rod are all perfectly fitted and connected, provisions being made for wear; the boxes for quill and spindle being made of brass, are tapering and split and provided with compression screws for taking up wear. The connecting rod has brass bushings, with provision for taking up all wear. The crank wheel is accurately balanced to the parts attached to it, and the pin and shaft are made of steel, abundantly heavy for the purpose intended.

The compound treadle may be speedily adjusted, producing from one to four and a-half inches throw of the table, changing depth of mortise at the same time and making it suitable for all classes of work; besides this it is weighted, thus perfectly counterbalancing the table. The boring attachment is securely fitted to the machine, and may be stopped or started at will. It consists of a large steel "bit" spindle, driving shaft and two mitre gears, the latter having a cover as a protection against dust. The boring spindle has sufficient range for every purpose, and is controlled by a hand lever placed in convenient reach of the operator. An adjustable stop is furnished to regulate depth of holes to be bored. The machine is furnished with one ¼, ⅜, ½, ⅝ and ¾-inch boring bits and chisels and necessary wrenches. Tight and loose pulleys are placed between bearings, and are twelve inches in diameter by three and a-half inches face. The speed should be 450 revolutions per minute.

Southern Lumber Notes.

Messrs. B. M. M. De Nemegyei, of Caldwell, W. Va.; F. De Nemegyei, of New York, and A. C. Holtz, of Grafton, W. Va., will, with other capitalists, form a lumber company and erect plant at Caldwell. Two circular saw mills of thirty-six horse-power each will be put in, and they

will cut hardwood for the export trade as a specialty, also bill stuff of all kinds.

THE Desha (Ark.) Lumber Co. is shipping about 250,000 feet of lumber per week.

ALABAMA parties have made a sale of some millions of feet of lumber to Methudy & Myers, of St. Louis, Mo.

AT Woodville, Texas, on the 3d instant, the lands, lumber, merchandise and saw and planing mills of the Warren Lumber Co. were sold to John H. Kirby, trustee, of Houston, Texas, and the price paid was $58,350. The mill will be reorganized with Northern capital.

THE L. Miller Shingle Co.'s mill at Orange, Texas, has resumed operations for a four months' run. They will cut T. Bancroft & Sons' timber. During the period the mill has been shut down many improvements have been made in the entire plant to enable the company to turn out more rapidly a first-class shingle.

ROBERTSON & Co. will start a large saw mill at Hollow Poplar, N. C., at once. The outfit was shipped to Erwin, Tenn., over the Three Cs and hauled overland to Hollow Poplar on the 3d instant.

A LARGE quantity of lumber and the drying-kiln of W. J. Whitehust, a sash, blind and door manufacturer of Richmond, Va., were destroyed by fire on Saturday, the 8th inst. The loss amounted to $8,000, fully covered by insurance.

THE shipments of lumber from Apalachicola during the past twelve months were over 30,000,000 superficial feet. In the above transactions only four firms were engaged. This aggregate amount exceeds the record of any previous year.

MR. L. F. WILLIS, of Crescent City, Fla., is rafting 250,000 feet of cypress timber down the Ocklawaha river for the Tilghman-Wilson Co., of Palatka.

A STEAM log-pulling boat of 25,000 feet capacity daily is to be added to the John H. Poe Shingle Co.'s plant at Lake Charles, La.

MESSRS. VINSON & HUGHES, of Wayne county, Va., have contracted to furnish 200 carloads of suitable timber for veneering to the Portsmouth (Ohio) Veneer Co.

THE steamship Algonquin left Jacksonville, Fla., for New York last week with 350,000 feet of lumber, 6,000 bundles of shingles, 4,500 crossties and other freight.

MESSRS. WOODS BROS., of Wheeling, W. Va., have put a double force of men at work in their planing mill and will run day and night.

J. L. BEIRNE contemplates putting a stave cutter in his mill at Beirne, Ark., to cut flour barrel staves from red oak, of which timber he has an extensive tract.

THE Alexander (W. Va.) Lumber Co. has completed its planing mill plant mentioned last week. Its capacity is 50,000 feet daily.

THE steamship Iroquois left Jacksonville, Fla., for New York last week with freight, including 300,000 feet of lumber, 2,000 crossties and 1,000 bundles of shingles.

THE Bergan & Meehan Stave Co., of Louisville, Ky., intends to locate a stave plant at Brinkley, Ark., and Mr. T. H. Meehan, manager of the company, is now there completing the necessary arrangements.

THE Watauga (Tenn.) Boom & Lumber Co.'s plant has passed into the control of Messrs. Carrier, Moisen & Co., and is now in full operation. About 4,000,000 feet of white pine, poplar and oak logs are now ready for sawing. Logging operations are progressing so rapidly that the firm expects to have 2,000,000 feet more logs floating by December 15.

JOHN GOSCH'S new planing mill and sash, door and blind factory at Eutawville, S. C., has lately been completed, and is now in operation. The outfit of machinery was furnished by F. & B. Holmes, of Buffalo, N. Y., and Rowley & Hermance, of Williamsport, Pa.

THE London *Timber Trades Journal* of the 1st instant says: "We observe that Messrs. Pierce, Watts & Co. are making fair progress with the fine parcel of American black walnut per Jarsburg. A parcel of United States wood, about 120 logs, ex Caspian from Baltimore, of good quality and size, has been secured by Messrs. Illinghworth, Ingham & Co., of Leeds."

THE White River Stave Co., of Clarendon, Ark., has purchased several hundred acres of oak timber lands and will operate stave mills.

INCLUDED in the freight of the steamship Seminole, from Jacksonville, Fla., to New York, last week was 385,000 feet of lumber, 4,000 bundles of shingles and 2,800 crossties.

THE Fort Motte (S. C.) Lumber & Shingle Co. has lately started up its new shingle plant.

THE P. A. Demens Woodworking Co.'s plant at Asheville, N. C., was sold by the receiver, Mr. Locke Craig, on the 8th inst. Mr. Lewis Maddux and James M. Campbell, both of Asheville, were the purchasers at $18,000.

LUMBER MARKET REVIEWS.

New York.

OFFICE OF MANUFACTURERS' RECORD, No. 126 Liberty Street, NEW YORK, October 12.

For the past two days a great army of decorators have been painting this town red, all getting ready for the grand hurrah, and from present appearances all previous celebrations are to be surpassed. Already the city is thronged with people. We fancy if the spirit of Columbus hovers o'er the spot that there are many things in connection with the last 400 years which have passed since the event which we are now celebrating happened which will displease his sainted spirit. He found this country with the finest crop of timber that ever was seen before, but in the 400 years that have passed we have managed to get away with the larger part of it, and much of it which we are cutting to-day leaves us as poor as we were before it was touched.

This is particularly true of yellow pine, which continues in the dumps. There are no signs of improvement in this particular branch.

Building orders, 12 in. and under...	$19 50@	20 00
" " 14 in. and up.....	20 00@	21 00
Yard orders, random.....	17 00@	18 00
Ship stock, 40 ft. average.....	22 00@	23 00
Heart face siding, 1 and 1¼ in.....	18 00@	19 00
1-inch wide boards.....	22 00@	——
1¼ and 1½-inch wide boards.....	23 00@	——
Kiln-dried sap.....	15 00@	16 00
Rift-sawed flooring, rough cargo lot.	36 00@	38 00
" tongue and grooved, in carload lots.....	40 00@	——

In contrast with this condition is that of North Carolina pine, which has been advanced in price since our last quotation.

We learn that Mr. H. F. Seymour has arrived in town. This gentleman is here in the interest of several of the cypress manufacturers of Louisiana for the purpose of showing to the thick-headed architects the merits of cypress lumber. It is probable that he will have an exhibition of this wood somewhere in this city and bring the architects in contact with it, with the idea of having it more extensively used than it has been in the past. That he will succeed we have not the slightest doubt.

SOUTHERN HARDWOODS.

Notwithstanding the near approach of the presidential election, and spite of the fact that this week is given up to festivity, the hardwood market presents very encouraging features. Prices show more of a tendency to advance than we have noticed this year, and the increased demand has exhausted stocks to such a degree that buyers are getting hungry, and they find that this hunger is not easily satisfied. Stocks they want are scarce, and their orders are not so easily filled as they would have been some time ago.

The demand for poplar is better than we have known it for some time past. Good stocks at the manufacturer's point are very hard to find, and this condition makes it extremely probable that there will be an advance in price before very long. Firsts and seconds are in very good demand in all thicknesses. Squares are particularly scarce in dry stock. There is also a good demand for saps. The demand for culls is so small that prices rule low.

There is a lively demand for good quality in walnut, particularly in export stock. Rejects are only in fair demand, but there is quite a call for good culls, and the market could take quite a quantity of this stock.

Evidences accumulate that the stocks of quartered oak are getting low, and that our dealers will soon have to replenish. Whether they will do so at present prices, which are already too low, is a question. We should like very much to see a good big advance in this wood. Good firsts and seconds are going from $49.00 to $53.00. This is entirely too low.

1x6 inch and up.....	$39 00@	50 00
Thicker.....	50 00@	53 00
Common.....	35 00@	38 00

There is very little call for common and none to speak of for culls.

There is a scarcity of thick plain oak of good quality and dryness. There is some call for rejects, but very little for culls.

1x8 inch and up.....	$35 00@	36 00
1¼ and 1½ inch.....	36 00@	38 00
2 inch.....	37 00@	39 00
Export oak.....	32 00@	34 00

We would at no time advise the shipment of culls, as shippers would have to take anything they could get.

This market could at the present time take a considerable quantity of thick ash. Other thicknesses are in good demand, but not to so great an extent as the thick lumber.

1 inch.....	$35 00@	37 00
¼, ½ and 2 inch.....	37 00@	40 00
2½, 3 and 4 inch.....	38 00@	41 00
Common.....	22 00@	24 00
Balusters.....	22 00@	26 00

Cherry still continues to be a great wood and in good demand, with no prospects of there being any over supply. In fact, we would be surprised to see an advance in price for all grades and qualities of this wood.

There is a feeling among the trade that notwithstanding this is presidential election year, that trade will not suffer much. In fact, we are inclined to think that people generally expect a good trade this fall, and unless all signs fail next spring will be one of the best in our history.

Baltimore.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, October 13.

The movement in lumber and timber during the past week has been more satisfactory, and under present climatic conditions business is greatly facilitated. The market exhibits in many respects a more decided tone of improvement, and there is considerable activity in almost every department. As to receipts of Virginia and North Carolina yellow pine they continue liberal, and stocks on hand furnish some choice selections in supplying the regular and constant demand now present. Values are generally firm, and certain dimensions are advanced, as previously noted, the change being made by the North Carolina Pine Lumber Co., and is likely to be firmly maintained under the general urgent demand for this popular wood. The stock of air-dried lumber on hand is not excessive, and the demand is better, while values show a very steady tone. In white pine there is a better inquiry, and some large lots have changed hands during the past week. Cypress is in good request, and prices for better grades firm. Hardwoods are also showing up better. A fairly good demand from builders exists for oak, ash and other woods for finishing interiors, and prices are generally firm. There is a moderate inquiry for woods for furniture purposes, and prices are generally steady, with moderate stocks of such woods. Planing mills still report a fair business, and box manufacturers are generally fully employed, with orders in some cases delayed on account of pressure in business. The shingle market shows considerable activity, and stocks are still insufficient to meet the urgent demand for certain grades. Laths are quiet and nominally steady, with a fair supply. The following revised list represents the prices current at this date:

VIRGINIA AND NORTH CAROLINA PINE.		
5-4x10 and 12 No. 2, kiln dried.....	$17 00@	17 25
4-4x10 and 12 No. 1, " "	19 75@	20 25
4-4 narrow edge, No. 1, kiln dried..	17 25@	17 75
4-4 wide edge, " " " ..	22 50@	——
6-4x8, 10 and 12, " " " ..	22 25@	23 50
4-4 No. 1 edge flooring, air dried...	15 50@	16 00
4-4 No. 2 edge flooring.....	12 50@	13 50
4-4 No. 1 12-inch stock.....	16 50@	17 50
4-4 No. 2 " "	13 50@	14 50
4-4 edge box or rough wide	9 75@	10 25
4-4 " " (ordin'y widths)	9 00@	——
4-4 " " (narrow).....	8 25@	8 75
4-4x12 " "	11 00@	11 50
¼ narrow edge.....	7 00@	8 00
¼ all widths.....	8 00@	9 00
¼ 10x16 wide.....	10 00@	10 50
Small joists, 2½—12, 14 and 16 long.	8 00@	8 50
Large joists, 3—16 long and up.....	10 00@	11 00
Scantling, 2x3—16	10 00@	10 50
" 2x4—16, 18 and 20.....	10 00@	——
" 3x4—16, 18 and 20.....	10 00@	——
" 6-4x12—16.....	10 00@	10 50
" 8-4x12—16.....	10 00@	10 50
" 6-4x16—16.....	10 00@	——
" 8-4x16—16	10 00@	——
SOUTHERN PINE.		
Siding and edge boards.....	14 50@	15 00
Heart face boards.....	22 50@	23 50
WHITE PINE.		
1st and 2d clear, 4-4.....	48 00@	51 00
" " 5-4, 6-4 and 8-4....	48 50@	51 50
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@	44 00
Good edge culls.....	14 50@	15 50
Good stock.....	17 00@	17 50
White pine, No. 1, 4-foot headed pickets.....	13 50@	14 50
4-4 selected edge.....	39 00@	43 50
6x8-4 selected edge, box out.....	39 00@	45 00
CYPRESS.		
4-4x6, 16 feet, clear.....	23 50@	24 00
4-4x6, 16 feet, fencing.....	12 50@	13 50
4-4 rough edge.....	9 00@	9 50
4-4 edge, Nos. 1 and 2.....	18 50@	21 00
HARDWOODS.		
Walnut.		
⅝, Nos. 1 and 2.....	75 00@	100 00
4-4, Nos. 1 and 2.....	90 00@	100 00
5-4, 6-4 and 8-4.....	95 00@	110 00
Nos. 2½, 3 and 4.....	125 00@	——
Newell stuff, clear of heart.....	125 00@	——
Culls.....	30 00@	35 00
Oak.		
Cabinet, white and red, plain sawed and good 1 and 2, 8 in. and up, 12 to 16 feet long, 4-4.....	35 00@	40 00
5-4 to 8-4.....	35 00@	40 00
Quartered white, 1 and 2 quality, all figured, 6 in. and up wide, 4-4....	50 00@	53 00
Culls.....	10 00@	15 00
Poplar.		
Nos. 1 and 2, ⅝.....	21 50@	23 50
" " 4-4.....	24 50@	26 50
Nos. 5, 6 and 8-4.....	27 00@	30 00
In yellow pine cargoes, log run stock.....	12 50@	16 50
Culls.....	12 50@	14 50
SHINGLES.		
Cypress, No. 1 hearts, sawed, 6x20.	7 75@	8 00
No. 1 saps, sawed, 6x20.....	6 00@	6 50
No. 1 hearts, shaved, 6x20.....	6 50@	7 00
No. 1 saps, shaved, 6x20.....	5 25@	5 50
LATHS.		
White pine.....	2 75@	2 80
Spruce.....	2 40@	2 45
Cypress.....	2 15@	2 20

Norfolk.

[From our own Correspondent.]

NORFOLK, VA., October 12.

The lumber market of this port still shows that healthy activity previously noted, and nowhere on the Atlantic coast is the improvement so marked as at this and interior points of the State. There has been a brisk demand during the past week, and latest advices from the interior milling districts are of a most encouraging character. Orders for Virginia and North Carolina kiln-dried lumber are coming in freely at nearly all milling points, and in local circles and elsewhere mills are running to their full capacity. The list of values throughout is firmly mantained, and the recent advance has, if anything, caused a more pronounced demand for certain grades and dimensions of lumber. There is a steady demand for air-dried lumber, while receipts continue light and prices firm and hardening. For No. 1 the figures are $13.00 to $13.50, No. 2 is firm at $10.50, and for box $7.00 to $7.50 are the quoted figures. Flooring grades are active with a good inquiry, while there is not any urgent demand for box lumber. Cypress lumber is in good demand, and shingles continue very active with a small supply and prices very steady. All the planing mills report an improvement in business, and prices realized are better than usual.

Kiln-dried North Carolina pine lumber f. o. b. at this port is quoted as follows:

4/4 fill No. 1	$ 7 50@	——
4/4 fill No. 2	16 00@	——
5/4x6 No. 1	21 00@	——
5/4x6 No. 2	21 50@	——
5/4x6 No. 3	15 00@	——
5/4x12 No. 2	16 00@	——
5/4 edge No. 1	17 50@	——
5/4 edge No. 2	13 50@	——
4/4 fill No. 1	28 00@	——
4/4 fill No. 2	15 00@	——
4/4x6 No. 1	18 50@	——
4/4x12 No. 1	14 50@	——
4/4x6 No. 2	18 00@	——
4/4x12 No. 2	15 00@	——
4/4 edge No. 1	19 50@	——
4/4 edge No. 2	10 50@	——
4/4x8, 10 and 12 culls or box	9 00@	10 00
4/4x8 edge, cull or box	8 00@	8 50
VIRGINIA PINE.		
4/4 flooring boards (dry and clear)	13 50@	14 50
4/4 flooring boards (rough)	7 75@	8 50
SHINGLES.		
No. 1 heart, split, car lots	6 50@	7 50
No. 2 heart, split, car lots	5 50@	6 50
No. 1 sap, split, car lots	4 75@	5 50
No. 2 sap, split, car lots	4 25@	5 00
No. 1 sawed hearts, car lots	6 50@	7 00
No. 2 sawed hearts, car lots	5 00@	5 50
WOOD.		
Hard, per cord	2 75@	3 00
Pine, per cord	2 75@	3 00
STAVES.		
Red oak hogshead, prime	36 00@	38 00
Red oak hogshead, culls	22 00@	——
White oak hogshead, prime	50 00@	53 00
White oak hogshead, culls	30 00@	——
White oak heading, prime	50 00@	53 00
White oak heading, culls	30 00@	——

Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., October 11.

The volume of trade in lumber and timber during the past week shows some improvement, and the market has ruled fairly active, with a good demand from coastwise ports. There is a gradual hardening of values, and the demand is very regular, while mills are all busy in completing orders which have been behind for some time. The demand from the West Indies and South America is expected to improve in the near future, and already there are buyers from these countries in the market looking round. There is no change in prices, and the whole list continues quite firm. Merchantable lumber holds steady at $14.00 to $16.00 for city sawed, and $12.00 to $14.00 for railroad; square and round timber, $9.00 to $13.00 for railroad, and $8.00 to $11.00 for raft. Dock timber is firm at $4.50 to $6.50, and shipping $8.50 to $10.50. Shingles are in good demand and firm at $5.00 to $7.00 per thousand. Freight rates are steady, and on resawed lumber to Philadelphia $4.62½ is the rate, and to New York $4.75; crossties, basis 4½, are quoted at 15 cents each.

EXPORTS OF LUMBER FROM CHARLESTON FROM SEPTEMBER 1, 1891, TO OCTOBER 7, 1892.

Exported to	1892-'93. Feet.	1891-'92. Feet.
New York	3,050,864	4,456,040
Boston	.....	.....
Philadelphia	547,000	633,000
Baltimore	446,000	251,000
Other United States ports	.....	995,000
Total coastwise	4,052,864	6,335,040
Great Britain	.....	.....
Palermo	.....	.....
France	.....	.....
West Indies	440,759	.....
South America	.....	398,000
Nova Scotia	.....	.....
Other foreign ports	.....	.....
Total foreign	440,759	398,000
Grand total	4,493,623	6,706,040

Late advices from the interior of the State report a good demand for cypress. The Santee River Cypress Lumber Co., having cut all their logs, have shut down to await the rise in December. This company have a choice lot of several million feet of cypress lumber in pile which is being rapidly shipped to the Eastern and Middle States. The Palmetto Cypress Co., of Georgetown, S. C., has recently purchased a Perkins rotary for its large plant and will put it in as soon as the other machinery arrives. The Gardner & Lacy Co., of the same place, are running regularly and report a good demand for cypress lumber and shingles.

Savannah.

[From our own Correspondent.]

SAVANNAH, GA., October 11.

There is a fair activity in local lumber circles as well as at all interior milling sections throughout the State. During the week there has been a steady movement, and the demand is good for all grades of choice manufactured lumber. Coastwise ports have taken the bulk of the shipments for the past week, which aggregate 2,196,941 feet of lumber, 210,000 shingles, 15,000 staves, five cases of cedar and 250 bundles of laths. In the list of values there is no material change, and prices are generally firm, especially for the better grades. Easy sizes are still held at $11.50 to $13.00, ordinary $12.00 to $16.50, difficult $14.00 to $25.00, flooring boards $14.50 to $22.00 and shipstuff $15.50 to $25.00. Lumber freights are dull but steady, with a fair offering of tonnage at the moment. Sail rates from this and nearby Georgia ports are quoted nominally at $4.25 to $5.00 for a range including Baltimore and Portland, Me. Timber is quoted 50 cents to $1.00 higher than lumber rates. Rates to the West Indies are nominal, to Rosario $16.00 to $17.00, to Buenos Ayres or Montevideo $14.00, to Rio Janeiro $15.00, to Spanish and Mediterranean ports $12.00 and to the United Kingdom for orders nominal for lumber at £4 10s per standard. Steamer rates to New York are quoted at $7.00, to Philadelphia and Boston $8.00 and Baltimore $6.50.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., October 11.

The month of September is generally considered one of the dullest of the year, but the business of last month has shown a larger volume of trade than usual and exceeds that of any previous year. Hewn timber has been in better demand and shows a large increase, while there is a good demand for sawn timber as well. Prices are very steady, and hewn timber ranges from eleven to fifteen cents per cubic foot, 100-foot average, the contract basis being thirteen cents. Sawn timber is in good request at eleven cents. The demand is mostly foreign, and as stocks are not large in the European markets there is a better inquiry for timber adapted for railway, warehouse and dock building. The exports to foreign ports for the past week were 12,512 feet of hewn timber, and since September 1, 1892, 229,678 cubic feet, against 62,565 cubic feet for the corresponding period last year. Of sawn timber 80,011 cubic feet were exported during the week, and since September 1, 1892, 154,675 cubic feet, against 2,353 cubic feet last year. The coastwise and foreign exports of lumber for the past week were 874,207 superficial feet of lumber, and since September 1, 1892, 5,097,419 feet, against 4,674,074 feet for the corresponding period last year. There is a good demand for all choice grades and dimensions of lumber and prices are very steady. Shingles are in good demand and prices are firm, with stocks hardly equal to the sharp inquiry prevailing. Drawn No. 1 are quoted at $3.00 delivered, and No. 2 at $2.00. Sawn shingles, 16-inch, wholesale, 50,000 and up, f. o. b., are steady at $2.70 for best, and prime $2.80. The general outlook for a good season's trade is very fair, and both here and at interior points everything in the lumber way is fairly active. A. S. Benn, of the shipping firm of Hunter, Benn & Co., has been elected a member of the Mobile river commission. The Seaboard Manufacturing Co.'s ship-yard and marine ways here are being enlarged, and arrangements are being made for the establishment of shops for building barges and sailing vessels on an extensive scale.

Memphis.

[From our own Correspondent.]

MEMPHIS, TENN., October 11.

There still continues to be a very active business in lumber on this market, both local and shipping. The crop prospects are growing worse every day, the cotton bolls drying and shriveling on the stalk instead of opening, but notwithstanding this there continues to be a goodly number of new building enterprises.

The fall display of the Young Men's Business League, which opened last week, was very largely attended, as much so as such things usually are, as was also the opening days of the Interstate Fair Association.

There is an ample supply of material in the local yards in everything except poplar. There is a good demand for cottonwood for general purposes, and of cypress for its regular work of tanks, well tubing, etc., as also for porches, lattice and outside work. In oak there is not so good a demand for quartered, which fluctuates to considerable extent, but for plain sawed the call is steady and prices well sustained. In rough lumber, there is a disposition to maintain prices and stop the cutting indulged in during the past summer. Ash is in good demand and fair supply. There is just now plenty of good dry of the better grades.

The mill supply men say that the business is better now than for the past few weeks and as good as they could ask at this season, but that they are collecting nothing. The kindred branches of the lumber business, boxes, cooperage and woodworking generally, are all doing well on full time and good prices, but collections are not what they should be. The large concerns may hold out without collecting, but the smaller ones will get in trouble unless money comes in, and I am unable to see where it is to come from. The planter has nothing upon which to raise money. He has not enough to repay his advances and no prospect of much this year, and if the planter does not pay, the merchant and country business man cannot.

There is now much talk and some working for a branch railroad from Rosedale, Miss., on the line of the Louisville, New Orleans & Texas road, out to and beyond the Bayou Phalie. This would bring within profitable reach an enormous extent of territory covered with the finest of hardwood timber, and would give a large extent of territory to cover with mills and manufactories. The bayou is navigable for forty miles or more through a splendid timber country now practically out of reach.

Articles of incorporation were filed on the 5th for the Arkansas Carriage & Buggy Co., of Little Rock, with a capital of $25,000. Charles M. Simmons, president; Andrew Hutte, secretary.

The American Railway Water Supply Co. are putting in one of their automatic water tank fixtures at the water tank of the K. C., M. & B. R. R. at Holly Springs, Miss., with an agreement on the part of the road to equip the entire line with them, provided the pump works as well as the experimental one which has been in operation for some months past. This will be a full and sufficient endorsement of the value of this apparatus.

There are no changes in quotations and none at present in sight, though they are still firm and well sustained.

BLACK WALNUT.		
1st and 2d, 1, 1½ and 2-inch	$65 00@	70 00
Common	35 50@	40 00
Counter tops	90 00@	110 00
ASH.		
1st and 2d clear, 1 to 4-inch	24 00@	30 00
Common	12 00@	14 00
CYPRESS.		
1-inch, 1st and 2d clear	22 00@	24 00
1¼, 1½ and 2-inch	24 00@	26 00
Fencing 1x6, 16 feet	15 00@	16 00
POPLAR.		
1-inch, 1st and 2d clear	24 00@	25 00
1½ and 2 inch, 1st and 2d clear	26 00@	28 00
Common boards	14 00@	16 00
Dressed, 1, 1½ & 2-in., 1st & 2d clear	28 00@	30 00
Common dressed, 1-inch	16 00@	17 50
Squares	22 50@	26 00
COTTONWOOD.		
1 to 3-inch mill run, culls out	9 00@	12 00
Squares	12 50@	16 00
RED GUM.		
1st and 2d	16 00@	20 00
Common and culls	8 00@	10 00
OAK.		
1 to 4-inch, 1st and 2d	24 00@	26 00
Common, 1 and 2-inch	13 00@	15 00
Quarter oak, 1-inch, 1st and 2d	30 00@	32 00
Quarter oak, 1¼-inch and up	34 00@	36 00

White sycamore.

YELLOW PINE.		
1st and 2d, 1½ and 2-inch	18 00@	20 00
Dressed	25 00@	30 00
Flooring, 5 and 5/4 and up	17 50@	——
Flooring, 3 and 4/4 and up	17 50@	20 00
2d flooring	15 00@	17 50
Heart step lumber	27 50@	——
Ceiling, 1st and 2d, ½, ⅝ and ¾	17 50@	20 00
Ceiling, 1st and 2d, ¼ and ⅜	16 00@	——
Common f. o. b. Memphis.		
Car lots	12 50@	——
TIMBER (LOGS).		
Poplar	6 00@	10 00
Cypress	6 00@	9 00
Cottonwood	3 00@	4 00
Gum	3 00@	4 50
Oak	6 00@	12 00
Ash	8 00@	13 00
Black walnut	15 00@	50 00
SHINGLES.		
No. 1 heart cypress, 16-inch	3 00@	——
No. 1 sap, 16-inch	2 25@	——
LATH.		
Poplar	2 00@	2 75
Cypress	—— @	2 50
Pine	—— @	2 00

Beaumont.

BEAUMONT, TEXAS, October 10.

The lumber situation at this point is not in any degree changed from last report, and both here and at all points throughout the milling section there is a very steady and forward movement. There is a good demand for all good grades of manufactured lumber, and values show considerable firmness, with an advancing tendency. Indeed, the outlook is quite encouraging for a good trade during the fall and winter months, and operators are everywhere busily engaged and have all they can do in some cases to supply the demand. There is a limited supply of cars at present, which restricts somewhat the advance of trade in lumber. An important factor in the future improvement of the lumber trade is the deepening of Sabine Pass, which is the outlet for this port and Orange, Texas. Proposals for this work have been opened by Major B. Quinn, engineer in charge of the district, and it is contemplated to extend the west jetty and dredge the channel out to a width of sixty feet and depth of sixteen feet at low water, with a length of 17,000 feet. All the mills on the Sabine & East Texas road are running full time and have orders to keep them busy for some time to come. The L. Miller Shingle Co.'s mill, which has been shut down for some time, resumed operations on the 4th inst. The company has secured a timber supply for four or five months to come, and with the improvements completed they expect to have a large output of this product. At Westlake and Lake Charles, La., there is considerable activity in the milling line, although the demand is rather more quiet than usual, but still there is plenty of orders and business enough in sight to keep the mills employed for several weeks to come. Throughout the State the outlook for lumber and timber is satisfactory, and the organization of new companies and development of new territory speaks volumes in favor of the trade. One of the most complete plants in course of erection in Houston is that of R. D. Gribble & Co., combining planing mill, sash, door and blind factory, which will have all the modern appliances for executing orders with promptness and dispatch. The Samson Lumber & Shingle Co., formed several months ago by parties from New Orleans and Berwick, La., are about to erect an extensive plant at the latter point. They propose building a saw mill to cut 40,000 feet daily and a shingle mill of 100,000 per day capacity. At the close of the week there are few disturbing elements in the market; the principal one, however, is the uncertainty as regards rates, which cause dealers to hold off until a settlement is arrived at. Railroad officials during the car famine are trying to relieve shippers, and are furnishing cars as rapidly as possible. In the meantime stock is being yarded to await shipment.

MR. R. V. COX, of Withlacoochee, Fla., in renewing his subscription to the MANUFACTURERS' RECORD, says: "Don't ever fail to mail the MANUFACTURERS' RECORD to me, as I cannot do without it."

IRON MARKETS.

Philadelphia.

[From our own Correspondent.]

PHILADELPHIA, October 12.

In a general way the iron market in this vicinity continues in a satisfactory condition, whatever weak spots there are being restricted to certain lines of finished material. The demand for pig iron continues of fair proportion, and the leading producers are quoting from twenty-five to fifty cents per ton advance on the prices realized a month ago, without, however, taking many orders at the new rates. Buyers refuse to consider any business that is not at the prices previously in force, and even when the figures are satisfactory the amount of iron taken is only sufficient to tide them over the present. Furnacemen are very cautious about making any increase in ruling quotations for fear of inducing some of the idle stacks to go into operation, and thereby further complicate the situation. For the past few months consumption has been in excess of the production, and the present improved tone of the market for crude material has been largely due to this fact, and the knowledge that the reduction of stocks at the furnaces was of sufficient extent to result in a scarcity of some of the leading brands. The returns of the quantity of unsold pig iron held by makers or their agents, as reported to the American Iron and Steel Association, show that on October 1st the amount on hand unsold was 691,468 net tons, as compared with 826,500 tons on hand July 1st, and 804,808 tons on April 1st. The decrease of 135,032 net tons since July 1st is believed to have taken place during the past six weeks, and each week is now expected to show a further decline in stocks if no important increase in production occurs. A number of furnaces have already gone into blast during the past few weeks, but the actual output has not been increased to any great extent. The following quotations fairly cover the sales made of leading brands of iron, tidewater delivery or its equivalent:

Standard Pa. No. 1 X	$13 00@	13 50
" " No. 2 X	14 00@	14 50
" Forge	13 00@	13 50
Southern coke No. 1 foundry	14 25@	18 00
" " No. 2 "	13 50@	14 00
" gray forge	12 50@	13 25

Pittsburg.

[From our own Correspondent.]

PITTSBURG, October 12.

The slight signs of life in the iron market that showed to the fore a few weeks ago are still in existence, and are likely to be kept up. The fear that the little business done might slip away was groundless, and the best opinions to-day are that the pig iron trade is better all around and the indications are very good for the slight improvement to be maintained. This is the best thing that can be said of the situation, but this is very well received by the furnacemen and brokers. Since the beginning of October the improvement has been quite marked, but is more noticeable from the large number of inquiries than the actual sales made. Inquiries are plenty for all lines of pig, with the preference in favor of Bessemer.

These inquiries, coupled with the fact of sales made in the past month and following them up, form the grounds for the belief that the improvement is likely to continue. During September stocks were reduced about 73,000 tons in coke iron, and this is regarded as a very strong feature of the market now. At this rate with the flow of inquiries the men interested in pig feel better than they have for a year. That stocks could be reduced at all is a fact so pleasant that the existing hopefulness is very striking.

Regarding prices, there have been no actual changes for some time, although rumors to the effect that quotations do not represent the actual condition have been far more numerous than transactions. The newest thing in this connection is the open report that the Carnegie Company is in the market to sell, and is selling right and left, but as this has been the case for some little time there can scarcely be any further effect than is felt now. However, should the Carnegie Company continue this plan and cut the wide swath they are capable of, there is no telling where the end will be. Last week's quotations are unchanged:

Gray forge	$12 50@	12 60
Mill iron	12 50@	12 75
Foundry No. 1	14 00@	14 25
" No. 2	13 00@	13 25
Bessemer	13 75@	——

Sales reported during the week include 1,000 tons of gray forge at $12.50, 2,000, 1,000 and 6,000 tons of Bessemer in the lots mentioned at $13.75. There were a number of inquiries for Bessemer and Southern charcoal iron, the only Southern product handled in this market, but the negotiations have not been completed. The dicker reported for big quantities of Bessemer have evidently fallen into nothing, for they are no longer heard of.

Wheeling.

[From our own Correspondent.]

WHEELING, W. VA., October 12.

There is a general feeling of improvement in the Wheeling iron and steel market to-day. Very little of this feeling comes from improved prices, for the reason that prices show no improvement except for Southern iron. The demand for an advance reported last week is being adhered to by Southern dealers with much greater tenacity than was expected. As has already been stated, the advance is due very largely to the great demand made by the pipe mills. Transactions covering something in the neighborhood of 200,000 tons have been reported from different pipe mills in the country, and the demand does not seem to be satisfied either. Most of these transactions have been in Southern iron, and they give it a stability and value that is very gratifying.

Southern foundry irons are being well received and are put into the Wheeling market at a considerably better figure than the valley iron. Northern foundry iron for Wheeling consumption have been shaded ten cents on the ton within the last week, and even further reduction would not be surprising. The volume of business transacted in all qualities is unusually large, mill irons taking a strong lead. Although the mills seem to be catching up with their orders, all hands still have ample business, and prospects are good for a continuation. Iron men generally feel that the present prosperous conditions have a considerable degree of permanency about them and that the beginning of 1893 will be auspicious.

One hears but little, however, about high prices or even moderate increases in price. Things seem to have settled down to a permanent state of lower values all round, as is evidenced by the fact that bar and sheet manufacturers, although crowded with orders, are either unable or disinclined to demand advances and secure them. The rapidity with which prices of pig iron have lowered is really remarkable. There is iron held in stock in Wheeling to-day that was bought by speculators less than three years ago at $24 in the belief that it would bring better prices in three months. The same quality of iron can be bought to-day for less than $14, and is more or less a drug on the market at that.

Bessemer conditions are less satisfactory than those surrounding any other brand, and the quotation is relatively lower.

No. 1 Northern mill iron	$12 50@	$12 75
Good tough Southern mill iron	12 25@	12 50
No. 1 Northern foundry	14 75@	15 00
No. 2 " "	13 50@	14 00
No. 3 " "	13 35@	13 50
Bessemer	12 75@	14 00

Chicago.

CHICAGO, October 8.

The general situation in this market continues healthy, with additional signs of improvement. Both the Northern and Southern coke manufacturers are maintaining firmness reported a week ago, and are selling freely at current quotations, which range twenty-five to fifty cents per ton higher than those which ruled a month ago. The Southern furnaces in particular report that they are well sold ahead, some of them on certain grades being unable to take any additional contracts for delivery this year. Consumers are now conceding that the market has turned, and small and medium sized orders are numerous in consequence. In this district the large buyers are to a large extent covered by contracts made during the summer, and therefore are not concerned over market changes. This is notably true of the agricultural implement makers, whose buying season comes during the spring and early summer months. General inquiries are active. These are well distributed over strong and soft grades. Heavy consumption is still a marked feature, and the short car supply caused by demand for rolling stock in which to move crops is causing much annoyance. Charcoal irons continue as last reported, but the outlook is improving on metal of this class, and manufacturers look for a stiffening of prices before close of the year.

We quote for cash f. o. b. Chicago:

Southern coke No. 2 foundry	$13 50@	14 00
" " No. 2 soft	13 00@	13 50
Lake Superior charcoal Nos. 1 to 6	17 00@	17 50

ROGERS, BROWN & MERWIN.

St. Louis.

ST. LOUIS, October 8.

We quote for cash f. o. b. cars St. Louis:

Southern coke No. 1	$14 00@	14 25
" " No. 2	12 75@	13 25
" " No. 3	12 50@	12 75
" gray forge	11 75@	12 00
" charcoal No. 1	15 50@	16 00
" " No. 2	15 00@	15 50
Missouri " No. 1	14 50@	15 00
" " No. 2	14 00@	14 50
Ohio softeners	16 50@	17 00
Lake Superior car wheel	17 75@	18 25
Southern " "	18 25@	18 75
Frick's Connellsville foundry coke	—@	5 65

ROGERS, BROWN & MEACHAM.

Cincinnati.

CINCINNATI, October 8.

While the market has not shown unusual activity the past week, it has been demonstrated that the advance of twenty-five cents per ton, now generally adopted by Southern furnaces, is none too much. Sales made at the advance will more than take the total product of the furnaces since last report. Large buyers have, in some cases, dropped negotiations when met with higher figures. The run of rank and file business, however, has been large in the aggregate, and no objection has been made to paying slightly better figures, in view of the steady decrease in stocks at the furnace. The movement of iron from furnace is very heavy. Some of the Southern roads are authority for the statement that it is the heaviest ever recorded. There are still some sizable blocks of iron at certain Southern furnaces, but they are melting away rapidly, and are small in comparison with the heavy orders booked for forward deliveries. There seems to be no disposition on the part of leading sellers of Southern iron to force up the price except as necessity compels it, and it is safe to say that no advance will be asked that cannot be fully maintained for months at least. One large producer kept on taking orders at current prices until most of the product for six months ahead had been disposed of. Even at the present figure there are few companies that can make further engagements except in very moderate amounts. In general, the financial and industrial sky is clearer than it has been any time this year. The grain and cotton markets are more satisfactory, railroad prospects are good, money is easy, confidence is more general and the speculative spirit is not active. The iron trade has been scraping on the bottom for so long that whatever there is left of it is proved to be sound by hard experience. There is no apparent reason why the next twelve months should not bring a little of the long-delayed encouragement.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry	$13 50@	13 75
" " No. 2 foundry and No. 1 soft	12 25@	12 75
Hanging Rock coke No. 1	18 50@	19 00
" " charcoal No. 1	19 00@	20 00
Tennessee charcoal No. 1	16 00@	16 50
Jackson county stone coal No. 1	16 00@	16 50
Southern coke gray forge	11 25@	11 75
" " mottled	11 00@	11 25
Standard Alabama car wheel	18 00@	19 00
Tennessee car wheel	17 00@	17 50
Lake Superior car wheel	17 50@	18 00

ROGERS, BROWN & CO.

Buffalo.

BUFFALO, October 8.

Extreme quietness prevails in this territory. All sales are of carload variety for immediate or early delivery. There is some buying or offering for Southern iron in progress, but as offers are largely at the prices of two or three weeks ago, they are firmly refused.

We quote for cash f. o. b. cars Buffalo:

No. 1 X foundry, strong, coke iron, Lake Superior ore	@	$15 25
No. 2 X foundry, strong, coke iron, Lake Superior ore	@	14 25
Ohio strong softener No. 1	@	15 25
Jackson county silvery No. 1	@	17 50
Lake Superior charcoal	@	16 50
Tennessee charcoal	@	17 00
Southern soft No. 1	@	14 15
Alabama car wheel	@	19 00
Hanging Rock charcoal	@	20 00

ROGERS, BROWN & CO.

Louisville.

LOUISVILLE, October 8.

While there has been no further advance and buying only in small lots, there is a degree of firmness in the pig iron market that is encouraging to both consumers and producers. Manufacturers are running full capacity, and are beginning to urge shipments forward a little in excess of their contracts; this is in marked contrast to the situation a short while back. Furnaces are not disposed to meet the views of buyers in their desire to make purchases for deliveries running nearly through 1893, and so far no contracts of any magnitude have been made for delivery extending beyond the first three months of the year.

We quote for cash f. o. b. cars Louisville:

Southern coke No. 1 foundry	$13 25@	13 75
" " No. 2 "	12 25@	12 75
" " No. 3 "	11 50@	11 75
" " gray forge	11 00@	11 50
" charcoal No. 1 foundry	15 00@	16 00
" car wheel	17 50@	19 00

GEO. H. HULL & CO.

TRADE NOTES.

MR. WILLIAM B. DIXIE, of Philadelphia, Pa., has obtained contract for the plumbing work of the new city hall building at Richmond, Va.

THE Robert Poole & Sons Co., Baltimore, after using the Sturtevant system of heating in their large foundry for two years, has decided to fit up their new erecting and machine shops with a similar device, and have placed the order for three large blowers and heaters with the B. F. Sturtevant Co., Boston.

THE Sioux City Engine Works, of St. Louis, Mo., have adopted a neat and effective manner of advertisement in the shape of a card, on one side of which is a calendar for the current month and also a cut of their Corliss engine, while on the other is printed a short notice calling attention to the wide range of machinery manufactured by them.

WALTER M. STEIN, of Philadelphia, Pa., has just closed a contract with the New Glasgow Iron, Coal & Railway Co., of New Glasgow, N. S., for an additional battery of eighteen retort coke ovens. This is the second order Mr. Stein has received from the above company, and is due to the highly satisfactory results given by the first plant.

FROM October 5 to December 3 the Brown & Sharpe Manufacturing Co. will have on exhibition at the fair of the Massachusetts Charitable Mechanics' Association at Boston, Mass., some 1,300 articles of interest to machinists. Among them will be stock cutters, gears and gauges, micrometer and vernier caliphers and many other of the fine tools for which this company is noted.

THE Hartman Sliding Blind Co., of Crestline, Ohio, has brought out a new fly screen which is meeting with much favor in the market. These screens are made to order only, and are of the best material. The same company has made an ingenious device for holding their inside sliding window blinds in position, so that the slats cannot move out of position. The arrangement is neat and serves its purpose excellently.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

☞ In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Broom Factory.—T. A. Davis has organized a stock company to establish a broom factory at once.

Greenville—Ice Factory.—Messrs. Martin & Potter, of the Greenville Mills, intend to put in an ice plant.*

Huntsville—Furniture Factory.—A furniture factory will likely be built. The Board of Trade can give information.

Huntsville—Dye Works.—The Huntsville Steam Laundry, Ed. T. Boiles, proprietor, has put in a complete dyeing plant.

Hurricane Bayou—Saw Mill.—Hall Bros. & Jernigan are erecting a new saw mill.

Mobile—Electric-light Plant.—The Mutual Light & Power Co. has let contract for the erection of a $150,000 electric plant.

Montgomery—Electric Plant.—The Mutual Light & Power Co. will commence work at once on its new electric plant (Brush system).

ARKANSAS.

Batesville—Coal Mines.—J. J. Huckabee, H. M. Hodge and L. C. Lindsey will develop coal mines near Batesville.

Cotton Plant—Saw Mill.—A. F. Marbury is building a saw mill and woodworking plant at a cost of $5,000. Most of machinery is secured.*

Des Arc—Flour Mill.—J. W. Petty proposes building a roller flour mill.*

Lead Hill—Flour Mill.—H. W. Redler will erect a 50-barrel flour mill. Contract has been let to the Barnard & Leas Manufacturing Co., of Moline, Illinois.

Fort Smith—Flour Mill and Gin.—The Roller Mill & Gin Co. has been incorporated with a capital stock of $10,000 for the purpose of operating cotton gin and flour mill. R. J. Abbott is president; C. L. Masher, vice-president and treasurer, and Joseph P. Matthews, secretary.

Little Rock—Mercantile Company.—The Arkansas Carriage & Buggy Depository has been incorporated with a capital stock of $25,000. Charles M. Simons is president; Joseph C. Herold, vice-president and treasurer, and A. J. Hale, secretary.

Paris—Transfer Company.—W. P. Van Hoozer, W. B. Deffenbaugh, G. G. Dandridge, W. R. Cherry and P. B. Cox have incorporated the Paris & Altus Transfer Co. with a capital stock of $10,000.

Piggott—Flour Mill.—Messrs. Wright & Lentz, of Dongola, Ills., will erect a roller flour mill in Piggott.

St. Francis—Saw Mill.—J. M. Myers, reported last week as putting in another saw mill, will operate as the Myers Lumber Co., Incorporated.*

FLORIDA.

Apalachicola—Saw Mill.—Messrs. Hagerman & Dunwoody will erect a saw mill.

Barbersville—Saw Mill.—W. A. Hutton has recently built a mill to saw cypress on Deep creek.

Palatka—Cider and Vinegar Mill.—C. I. Rowton has put in a cider and vinegar mill.

Pensacola—Fertilizer Works.—The Goulding Fertilizer Co. will probably rebuild its recently burned plant.

Winter Haven—Saw and Planing Mill.—A Mr. Dailey will erect an extensive saw and planing mill plant. Machinery has been secured.

GEORGIA.

Americus—Vehicle Works.—The Columbia Variety Works, of Columbia, Ala., will be removed to Americus. The works turn out wagons, carriages, etc.

Athens—Cotton Mill.—The Georgia Manufacturing Co. will rebuild its cotton mill reported in this issue as burned.

Augusta—Bottling Works.—A. F. Lucas and J. G. Brinson are equipping a bottling works plant, to be known as the Eureka Bottling Works.

Brunswick—Commission Company, etc.—Chas. B. Lloyd, F. E. Cunningham and A. E. Penniman have incorporated the Union Warehouse & Commission Co. to transact the business of public wharfinger, conduct warehouses, etc. The capital stock is $25,000.

Ringgold—Kaolin Mines, etc.—Kaolin mines have been discovered on the property of R. M. Jones, near Ringgold, and may possibly be developed.*

Savannah—Naval Stores, etc.—J. P. Williams, W. W. Gordon, W. C. Powell, J. A. G. Carson, B. F. Bullard and others have incorporated the Savannah Tank & Supply Co. to manufacture turpentine, naval stores, etc. The capital stock is $15,000, with privilege of increasing to $1,000,000.*

Tallapoosa—Woodworking Factory.—The Southern Piano Stool Co., reported last week, will start its factory immediately with a paid in capital of $7,000. Twenty hands will be employed.

KENTUCKY.

Carrollton—Cassimere Mill.—A $25,000 company may be organized to erect a cassimere mill. Frederick Balbian can be addressed for information.

Covington—Water Works.—G. W. Howell and O. J. Carpenter have incorporated the Suburban Supply Co. for the purpose of supplying water. The capital stock is $50,000.

Louisville—Coal Mining.—The Kentucky Cannel Co., reported recently as incorporated for coal mining, etc., has for its president, Graham Macfarlane; for vice-president, Thomas N. Mordue, and for secretary and treasurer, M. A. Senter. The capital stock is $100,000.

Middlesborough—Box Factory.—H. T. Noel, of Lancaster, lately reported as to start a box factory in Middlesborough, has obtained buildings and power, and will at once equip his plant; operations to commence next month; capacity 2,000 boxes daily.*

Nicholasville—Water Works.—The Nicholasville Water Co., lately reported, has its system now under construction, and expects to complete same before Christmas.

Normal—Flour Mill.—John G. Patton & Co. are building a flour mill.

LOUISIANA.

Lake Charles—Steam Laundry.—Patrick Crowley has erected a steam laundry.

New Orleans—Cotton Gins.—John J. Moll and associates intend to erect and operate a ginnery.

New Orleans—Brass Furnace and Machine Shop.—P. Thelen intends to erect and operate a brass furnace and machine shop.

New Orleans—Crockery Dealers.—The W. T. Logan Crockery Co., Limited, has been incorporated with Wm. T. Logan, as president and treasurer, and Dominique E. Seghers as secretary. The capital stock is $75,000.

White Castle—Electric-light Plant, etc.—The White Castle Lumber & Shingle Co. has lately built a new dry-kiln and added an electric-light plant.

MARYLAND.

Baltimore—Saw Mill.—Messrs. W. H. King & Co. intend to rebuild at once their saw-mill plant reported in this issue as burned.

Hagerstown—Cornmeal Mill.—D. A. Stickell is putting a new cornmeal outfit in his mill.

Washington, D. C.—Electric-power Plant.—The Metropolitan Street Railway Co. will build an electric-power plant.

MISSISSIPPI.

Greenville—Cotton Manufacturing, etc.—The Delta Cotton Co. has been incorporated with a capital stock of $100,000. Purpose, to operate a cotton factory, deal in cotton, etc.

Monticello—Mercantile Company.—The Lampton Bros. & Rawles Co. has been incorporated to transact a mercantile business with a capital stock of $12,000.

Natchez—Excelsior Factory.—Karl Lehman will start an excelsior factory.

Natchez—Water Works.—The sale of the Natchez Water & Sewer Co.'s plant to James S. Richardson, of New York, has been confirmed by the chancery court.

Tupelo—Foundry and Machine Shop.—The Tupelo Foundry & Machine Co., operating a foundry and machine shop, has incorporated with a capital stock of $2,500,000.

Waynesboro—Saw Mill.—Samuel West has lately started a saw mill.

NORTH CAROLINA.

Cleveland—Flour Mill.—P. M. Brown, of Bear Poplar, will erect a full roller flour mill. Contract has been let to the Case Manufacturing Co., of Columbus, Ohio.

Davidson College—Cotton Mill.—The Cornelius Cotton Mills have added more machinery.

Elizabeth City—Shingle Machine.—W. D. Lathrop & Co. have equipped their shingle mill complete.

Hamlet—Cotton Compress.—The Heath Cotton Co., of Norfolk, Va., has leased and will operate the compress just completed at Hamlet by the Seaboard Air Line.

Henderson—Flour Mill.—Silas Powell is putting considerable new machinery in his flour mill.

Morganton—Cotton Mill.—The Dunavant Cotton Manufacturing Co. will put 2,000 more spindles in its mills.

Mt. Airy—Flour Mill.—T. L. Brim has started a new flour mill, water power.

SOUTH CAROLINA.

Columbia—Dyeing Plant.—Messrs. Copleston & Ortman will equip a complete steam dyeing plant.

Florence—Flour Mill.—C. E. Jarrot will erect a flour mill. Machinery has been secured and contract for building let.

Florence—Machine Works.—T. M. Gallias has purchased the interest of Mr. Mortimer in the Palmetto Machine Works, and is putting in additional machinery.

Florence—Woodworking Factory.—David Bunn and T. E. North are enlarging their wagon and woodworking factory and putting in new machinery.

Florence—Iron Works.—Messrs. McLeod & Walsh have leased and will operate the Florence Iron Works.

Georgetown—Lumber Mill.—The Palmetto Cypress Co. will put another Perkins rotary shingle machine in its lumber mills.

Rock Hill—Buggy Factory.—J. M. Cherry, William J. Roddey, Thomas A. Crawford, David Hutchinson and John G. Anderson have incorporated the Rock Hill Buggy Co. to operate a buggy factory. The capital stock is $75,000.

TENNESSEE.

Arlington—Creamery.—A stock company has been organized to erect a creamery. Contract has been let for machinery.

Fowles—Spoke Factory.—Messrs. Miller & Son have started a spoke factory.

Memphis—Chair Factory.—G. H. Hodge, E. Brooks, F. H. Heiskell, J. P. Jordan and Thomas Clark have incorporated the Magnolia Chair Co. and will erect and operate a chair factory. Contract for building has been let and outfit of machinery ordered.

Selvicola—Woolen Mill.—The Ridge Creek Woolen Mill Co., just organized, will build a woolen mill. J. M. Latture is secretary and treasurer.

Selvicola—Flour Mill.—The Ridge Creek Woolen Mill Co. may build a roller mill.

Union City—Saw Mill.—Frank M. Woods will rebuild his saw mill reported in this issue as burned.

TEXAS.

El Paso—Water Works.—John C. Regan, of Omaha, Neb., and Daniel G. Kirshbaum, of Denver, Col., are endeavoring to obtain water works franchise from the city of El Paso.

Hearne—Electric-light Plant.—Peter L. Mary and William Brady have incorporated the Hearne Electric Light Co. for the purpose of operating an electric-light plant. The capital stock is $10,000.

Houston—Car Works.—Arrangements have been completed for the erection of the car works recently mentioned as arranged for by the Omaha & South Texas Land Co. The plant will consist of planing mill, blacksmith shops, construction houses, etc., and it will cost complete about $125,000. Work on the buildings will commence at once, and is to be superintended by J. M. Lunt, of Boston, Mass., and George W. Beale, of Portland, Me. The capacity of the works will be 1,000 cars yearly, with facilities for increasing largely.

Lott—Cotton Gin.—T. L. Hollingsworth is rebuilding his cotton gin recently burned. The new outfit was purchased from the Kingsland & Douglas Manufacturing Co., of St. Louis, Mo.

Runge—Grist Mill and Gin.—Messrs. Schorre Bros. will rebuild their cotton gin and grist mill recently burned.*

Runge—Cotton Gin.—Schorre Bros. are rebuilding their cotton gin recently reported as burned.

San Angelo—Water-power.—The Cunningham Water-Power Co. is constructing a water-power plant.

VIRGINIA.

Dorset—Brick Works.—John Pope, of Richmond, is erecting a brick plant at Dorset.

Elliston—Cigar Factory.—J. W. Barnett intends to start a cigar factory.

Lynchburg—Drug Mills.—The Southern Drug & Manufacturing Co. is now forming with a capital stock of $50,000. The company will be composed mainly of the Northern stockholders of the Lynchburg Drug Mills, lately assigned. The company will import, collect and mill foreign and indigenous crude drugs, and expects to secure new plant immediately. D. W. R. Read can give information.

Montvale—Cement Works.—The Ridgemont Cement & Manufacturing Co. will add new machinery to its works.*

Radford—Electric-light Plant.—Messrs. Mount & Jones, mentioned last week as securing electric franchise, will use the Fort Wayne Company's Wood machinery for arc lights and the Slattery system for incandescent lighting. All arrangements for machinery have been completed.

Richmond—Dry-kiln.—W. J. Whitehurst will at once rebuild his dry-kiln reported in this issue as burned.

Richmond—Electric-light Plant.—The committee on light has adopted a resolution to appropriate $125,000 for the erection of an electric-light plant and submitted it to the city council, who referred it to the finance committee.

Roanoke—Steam Laundry.—George W. Ammen & Co. may put additional machinery in their steam laundry.

Staunton—Novelty Works.—The Waddell Head Rest Co. has commenced the manufacture of its patent head rest for car seats.

Staunton—Electric-power Plant.—The City Street Car Co. will erect an electric-power plant to operate its railway. Contract has been let.

WEST VIRGINIA.

Benwood—Iron Works.—The Riverside Iron Works will build a new 21-inch plate mill at its works, thus doubling its plant's capacity; work on it has commenced.

Caldwell—Saw Mills.—B. M. De Nemegyei, A. C. Holtz, of Grafton; F. De Nemegyei, of New York, and others will erect saw mills at Caldwell.

Fairmont—Planing Mill.—M. C. and F. B. Dickerson have purchased site and will at once erect a planing mill.

Parkersburg—Lumber Plant.—The Little Kanawha Lumber Co. will doubtless rebuild its lumber plant reported in this issue as burned.

Shirley—Flour Mill.—Ralph Sweeney will build a 50-barrel flour mill. The Barnard & Leas Manufacturing Co., of Moline, Ills., has secured contract.

Wheeling—Tobacco Works.—Block Bros. will put a new boiler in their works.

Williamson—Saw and Planing Mill.—The White Lumber Co. will erect a saw and planing mill in Mate.

BURNED.

Aiken, S. C.—K. J. Tyler's grist and flour mill, near Aiken.

Athens, Ga.—The Georgia Manufacturing Co.'s cotton mill; loss $150,000.

Baltimore, Md.—William H. King & Sons' saw mill.

Bluff, Texas.—Paul Nordhausen's cotton gin.

Frederick City, Md.—The steam flour mills of James H. Gambrill; loss $30,000.

Kosse, Texas.—Bryan & Johnston's cotton gin.

Meriweather, Ga.—J. D. Minor's cotton gin.

Milledgeville, Ga.—Possers's Iron and Machine Works.

Parkersburg, W. Va.—The Little Kanawha Lumber Co.'s plant; loss $50,000.

Richmond, Va.—W. J. Whitehurst's dry-kiln.

Rising Star, Texas.—McGaskill & Co.'s cotton gin.

Union City, Tenn.—Frank M. Woods's saw mill.

BUILDING NOTES.

Americus, Ga.—Opera-house.—A company may be formed to build a new opera-house.

Anderson, S. C.—Hotel.—An addition 45x37 feet is being built to the Anderson Hotel at a cost of $6,000.

Atlanta, Ga.—Union Depot.—George J. Dorr and C. B. Holmes, of Chicago, Ill., have purchased a tract of land on which it is rumored that a depot will be built for the joint use of the Georgia, Carolina & Northern Railway (office,

Athens) and the Nashville, Chattanooga & St. Louis Railway (office, Nashville, Tenn.)

Barton, Md.—School Building.—The Alleghany county school board will erect a school building in Barton.

Bronson, Fla.—Courthouse.—The building of a new courthouse by Levy county is proposed. The county clerk can give information.

Camden, S. C.—John Burdell has awarded contract to Adams & Holler for the erection of a two-story business building.

Christiansburg, Va.—The Christiansburg Building Co. will be organized with a capital stock of $25,000.

Crisfield, Md.—Church.—B. B. Owens, of Baltimore, has prepared plans for a church 60x90 feet with 96-foot tower for the Methodist Protestant Church. It is to cost $20,000. Rev. J. M. Holmes can be addressed.

Durham, N. C.—Warehouse.—B. L. Duke is building a storage warehouse 20x80 feet to cost from $20,000 to $25,000.

Frostburg, Md.—School Building.—The erection of a two-story brick school building 76x112 feet is proposed. School Commissioner Beall can give information.

Gurley, Ala.—School Building.—The plans of Architect Breeden, of Huntsville, have been adopted for the building for the Donnell high school.

Harrisonburgh, Va.—Courthouse and Jail.—The building of a new courthouse and jail by Rockingham county is proposed.

Highfield, Md.—Hotel.—J. W. Shatzer intends building a hotel.

Hopkinsville, Ky.—Church.—The plans of Carpenter & Peebles, of Nashville, Tenn., have been adopted for the church to be built by the Baptists. It will be a white limestone structure with red sandstone trimmings, 80x130 feet, and cost about $20,000. Dr. James Rodman can be addressed.

Hot Springs, Ark.—Hotel.—Contract has been awarded P. J. Ledwidge to build a hotel at Spring Lake.

Lynchburg, Va.—Hotel.—Mr. Morrison will probably build a hotel at Sixth and Main streets.

Macon, Ga.—Hospital.—A hospital will probably be built. T. S. Jones can give information.

Macon, Ga.—School Building.—A school building will be erected at Bellevue. The board of education can give particulars.

Macon, Ga.—Hall.—The Knights of Pythias will shortly commence erecting their hall. It is to be three stories, 72x92 feet, and to cost with site $35,000.

Macon, Ga.—Jail.—The enlargement of the Bibb county jail or the building of a new one will probably be considered at the next meeting of the county commissioners.

Magnolia, Miss.—College.—An additional building will be erected for Magnolia College.

Mentone, Ala.—Hotel.—J. Craddock will enlarge his hotel.

New Orleans, La.—Stable.—The New Orleans City & Lake Railroad Co. will build a brick stable to cost about $11,000.

Newport News, Va.—W. H. Landon intends building a three-story brick business house. Teague & Marye are preparing the plans.

Newport News, Va.—Church.—The Presbyterians contemplate building a church.

Paris, Texas.—Public Building.—W. J. Edbrooke, supervising architect, Washington, D.C., will receive proposals until November 2 for all the labor and materials required for the trench excavation, foundations, cut-stone and brick work, iron and wood flooring, ceiling and roof construction, etc., for the United States courthouse and postoffice building at Paris.

Roanoke, Va.—Warehouse.—Joseph A. Galed, referred to in last issue, will not build a warehouse in Norfolk, but may build one in Roanoke.

Rockport, Texas—Hotel.—The Rockport Hotel Co. has been chartered by M. L. Robertson, J. B. Simpson and others, of Dallas, Texas. The capital stock is $25,000.

Staunton, Va.—City Hall.—Bids are invited for building the city hall and market-house lately mentioned. It is to be a two-story brick building 75x150 feet.

Union City, Tenn.—Hotel.—H. G. Lefiles is building a 44-room hotel. Heating apparatus will be put in.*

Washington, D. C.—Church.—The congregation of St. Matthew's Church will build a new church.

Washington, D. C.—Richardson & Burgess have been awarded contract to build a $20,000 villa for Hon. W. M. Stewart. A. L. Johnson, of Philadelphia, Pa., prepared the plans.

MR. J. L. HAND, of Jemison, Ala., has recently purchased and put in his saw mill at Jemison a new steam saw mill feed which he purchased from the Soule Steam Feed Works, of Meridian, Miss. George O. Smith, of Bainbridge, Ga., also has recently added to his saw mill at that place one of these new steam saw mill feeds.

RAILROAD CONSTRUCTION.

Abbeville, Ala.—Railroad.—H. B. Plant, of New York city, president of the Plant System, has offered to build the Abbeville Southern Railroad, mentioned in last issue, provided the people along the route will donate right of way, a bonus of $1,000 per mile and have survey made. The proposition has been accepted. The road is projected from Abbeville to some point on the Alabama Midland, and surveying will be commenced at once.

Atlanta, Ga.—Elevated Railway.—The Atlanta Elevated Terminal Railway Co., referred to last week, has been organized with Rufus B. Bullock, president; E. M. Blalock, treasurer; F. J. Hoyle, secretary, and H. T. McDaniel, chief engineer. The company will begin construction within ninety days, and is now obtaining right of way. The total cost of the union depot and elevated terminal railway is estimated at $2,500,000, and the capital stock, which is a like amount, has, we are informed, been all taken.

Baltimore, Md.—Electrical Railroad.—The Edmondson Avenue, Catonsville & Ellicott City Electric Railway Co. has been granted permission to lay tracks in the western section of the city.

Burnt Mills, Md.—Railroad.—Dr. C. G. Stone, William E. Mannakee and others are interested in a project to build a railroad from Takoma via Burnt Mills to Sandy Spring.

Cookeville, Tenn.—Railroad.—The Nashville & Knoxville Railroad Co. (office, Lebanon), which is building its road from Cookeville to Standing Stone, will finish the work this year, and during 1893 will build from Standing Stone to a connection with the East Tennessee, Virginia & Georgia system, striking either the Cincinnati Southern or the Knoxville branch.

Corpus Christi, Texas—Railroad.—The Corpus Christi & Eagle Pass Railway Co. has been chartered to build a railroad from Corpus Christi to Eagle Pass, a distance of about 250 miles. The capital stock is $300,000.

Crossville, Tenn.—Railroad.—Lina Beecher, president of the Genesis & Obed River Railroad Co., writes to the MANUFACTURERS' RECORD that his company is now building its road from Crossville to Johnson's Stand, a distance of fifteen miles, through the coking coal regions of the Cumberland Plateau, to make connection with the Nashville & Knoxville.

Dublin, Ga.—Railroad.—The Empire & Dublin Railroad under its reorganization will be the Oconee & Western Railway Co., and its office will be at Hawkinsville. Contract is to be let at once for completing the road to Dublin, work to commence about October 15 and be completed by January 1. A. E. Hachfield is president of the company.

Galveston, Texas—Railroad.—Michael F. Lynch, of Fort Worth, will make a preliminary survey for the proposed Galveston & Beaumont Railroad. A line will be run from Bolivar Point to Beaumont, thence to Shreveport, La. From Beaumont a return survey will be made to Smith's Point at Redfish bar for a possible connection with the North Galveston Railroad.

Greenwood, Miss.—Railroad.—It is stated that the Illinois Central Railway Co. (office, Chicago, Ill.) will build a branch line from Greenwood to Minter City, a distance of twenty miles, to connect its Yazoo & Mississippi Valley branch with the Tallahatchie branch of the Louisville, New Orleans & Texas.

Haines City, Fla.—Railroad.—The "Frost Proof Line" is the name of the company lately reported as to be organized. It intends constructing a railroad from Haines City to Avon Park as soon as possible, and ultimately extend it northward to a connection with some through line and southwesterly to a deep-water harbor on the Gulf. The officers are O. M. Crosby, of Avon Park, president; W. E. Pabor of Pabor Lake, vice-president; W. W. Davis, of Midland, secretary, and C. H. Smith, of Jacksonville, treasurer.

Harriman, Tenn.—Railroad.—George W. Easley, general manager of the Harriman Coal & Iron Railroad Co., reports that his company will complete its road to the Brushy mountain coal fields in Morgan county this fall and tracklaying commenced October 10. The company has five miles of road completed, and has purchased track material for seventeen miles of track.

Harriman, Tenn.—Railroad.—The Harriman & Port Royal Railroad Co. is reported as organized with A. E. P. Rockwell, president; James McDowell, vice-president, and R. H. Fitzhugh, of Franklin, N. C., manager.

Hope, Ark.—Railroad.—Engineer Tillson has gone over the route of the Louisville & Hope Railroad and reported the line practicable. It is probable that construction will soon begin.

Houston, Texas—Railroad.—The Houston Belt & Magnolia Park Railway Co. contemplates building its road from Magnolia Park to Harrisburg, a distance of three miles, and necessitating the construction of a bridge over Bray's bayou.

Huntsville, Ala.—Street Railway.—W. S. Wells has applied to the city council for a franchise to build a street railway.

Kanawha Falls, W. Va.—Railroad.—The branch mentioned in last issue as to be built up Loup creek by the Chesapeake & Ohio Railway Co. (office, Richmond) will be ten miles long. Gooch & Rinehart, of Staunton, Va., have contract for four miles.

La Porte, Texas—Railroad.—The La Porte, Houston & Northern Railway Co., which is building a railroad from La Porte to Houston, a distance of twenty-two miles, has been chartered by R. R. Green, of Kearney, Neb.; A. M. York, T. W. Lee, C. W. Woodbridge and others. The capital stock is $300,000.

Little Rock, Ark.—Railroad.—W. H. Toothaker, of Kansas City, Mo., second vice-president of the Arkansas Mineral Belt Railroad Co., mentioned last week as chartered with C. P. Huntington, president, to build a railroad from Little Rock to West Plains, Mo., writes that surveys are now being made and right of way will be secured.

Little Rock, Ark.—Railroad.—The Memphis, Hot Springs & Pacific Railway Co. has been chartered by B. E. Orr, of New York city; D. C. Rugg, of Hot Springs; J. W. Rose and W. A. Compton, of Little Rock. The road is to extend from Little Rock in a southeasterly direction through Pulaski, Saline and Garland counties to Hot Springs. The Arkansas Contract Co., of New Jersey, is said to have subscribed for $60,000 of the capital stock of $1,500,000. This makes the second company lately organized for the purpose of building a railroad between the points named. The first was chartered in September as the Little Rock & Hot Springs Railroad Co. by Zeb Ward, of Little Rock, and others. It was capitalized at $750,000.

Louisville, Ky.—Railroad.—The Louisville, St. Louis & Texas Railroad Co. has about completed survey for the construction of the railroad from West Point to Louisville, by which it is to obtain an independent entrance to the latter city. Some of the grading, it is learned, has been let to contract, and the road is to be completed this fall if possible. A new bridge will be built over Salt river.

Montgomery, Ala.—Electrical Railroad.—The Montgomery Terminal & Street Railway Co. will probably equip its mule line with electric power.

Nashville, Tenn.—Railroad.—Davidson county has decided to submit to a popular vote at the November election the proposition to subscribe for $350,000 of the capital stock of the Tennessee Midland Railroad Co. (office, Memphis), to be paid for after the company has completed its road from Perryville, on the Tennessee river, to Nashville.

Orangeburg, S. C.—Railroad.—The building of two short lines of railroad, one of which is to connect with the Charleston, Sumter & Northern at Vance, and the other with the South Bound, is contemplated.

Owensboro, Ky.—Railroad.—R. R. Hathaway has been awarded contract for building the Owensboro, Falls of Rough & Green River Railroad from the Louisville, St. Louis & Texas Railroad to its terminus at the head of Main street. Contract has also been awarded to Joseph Craban for a difficult job of grading and filling from Carter's cut to Barrett's ferry, east of Fordsville, on this road.

Pineville, Ky.—Railroad.—Contract has been let for building a railroad from the Louisville & Nashville at Pineville to the property of the Log Mountain Coal, Coke & Timber Co., a distance of twenty miles. Work has been commenced and the road is to be completed by April 1, 1893.

Rosedale, Miss.—Railroad.—It is stated that arrangements have been effected for building the Rosedale & Bogue Phalia Railroad to a point six miles east of Rosedale.

Rusk, Texas—Railroad.—The penitentiary board will probably take steps to secure the building of a railroad from the East Texas penitentiary to a point north or west from Rusk.

South Pittsburg, Tenn.—Electrical Railroad.—The Deptford & South Pittsburg Street Railway Co. is figuring on extending its road to Bridgeport, Ala., a distance of six miles, and changing to electric power.

Spartanburg, S. C.—Dummy Line.—The Spartanburg, Clifton & Glendale Railroad Co. will extend its dummy line to Whitney and Glendale as soon as surveys now in progress are completed. Contractors can apply to A. H. Leftwich, president, or Geo. E. Ladoham, chief engineer, for profiles and estimates.

Staunton, Va.—Electrical Railroad.—The City Street Car Co., which has franchise to operate its road by electricity, has awarded contract to Randolph Stalnaker for the equipment of its road. Work is to begin by November 1 and be completed by January 1, 1893.

Tallahassee, Fla.—Railroad.—It is expected that work will be resumed December 1 on the Carrabelle, Tallahassee & Georgia Railroad.

Victoria, Texas—Railroad.—S. C. Christopher is reported as about to commence work on a contract to build twenty miles of the Gulf, Newport & Northern Railroad, projected from Alligator Head, near Pass Caballo, on the coast, to the interior of the State.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Belting.—Schorre Bros., Runge, Texas, are in the market for belting.

Belting.—J. M. Myers, St. Francis, Ark., will buy belting.

Boiler.—The board of water commissioners of Cumberland, Md., William E. Griffith, secretary, is ready to receive bids for one 100 horse-power boiler, tubular or otherwise. The boiler must be capable of carrying 150 pounds steam pressure, and will be tested to double that amount water pressure before being put into use. The boiler must be first-class in every respect. Give full specifications, plan of foundations and bricking required. The award may depend upon how soon the boiler can be furnished.

Boiler.—Schorre Bros., Runge, Texas, are in the market for a boiler.

Boiler.—The Ridgemont Cement & Manufacturing Co., Montvale, Va., wants a sixty to eighty horse-power marine or return tubular boiler, new or second-hand.

Boilers.—The Hope Lumber Co., Marshall, Texas, will need boilers.

Box Machinery.—H. T. Noel, Lancaster, Ky., wants to buy outfit of machinery for box factory.

Corn Mill.—Dr. Lafferty, Crozet, Va., wants information on machinery for corn grinding into meal and cow feed; also on improvements in burr mills.

Cotton Gin.—Schorre Bros., Runge, Texas, are in the market for a cotton gin.

Cotton Mill Machinery.—The Elm Grove Cotton Mills, Lincolnton, N. C., want an electric stop-motion Denn warper at once. Must be in A1 condition and cheap.

Cotton Mill Machinery.—The Pearl Cotton Mills, J. M. Odell, president, Durham, N. C., will buy complete outfit for cotton mill; class of goods not yet determined.

Crusher.—The Ridgemont Cement & Manufacturing Co., Montvale, Va., wants a crusher (Blake style).

Electric-light Plant.—The city of Gallatin, Tenn., wants an electric-light plant. Address T. S. Vinson, recorder.

Engine.—Schorre Bros., Runge, Texas, are in the market for an engine.

Edger.—Cowles & Bodman, Lansing, W. Va., will want a gang edger.

Engine.—J. H. Vincent, Glenlock, Tenn., will want a good traction engine.

Engines.—The Hope Lumber Co., Marshall, Texas, will need engines.

Flour Mill.—E. J. Ware & Son, Hillsboro, Texas, want prices on a 75-barrel roller flour mill.

Flour Mill.—Manufacturers of roller process flour mill outfits should open correspondence with J. W. Pettery, Des Arc, Ark.

Fly-wheel.—The Ridgemont Cement & Manufacturing Co., Montvale, Va., wants a fly-wheel of about 1,000 pounds weight, not over ten feet in diameter, 4¼-inch bore and not over 10 inches through hub.

Grist Mill.—Schorre Bros., Runge, Texas, are in the market for grist mill.

Handle Machinery.—A. F. Marbury, Cotton Plant, Ark., will buy handle machinery.

Heating Apparatus.—William A. Bryan, Mount Airy, N. C., wants heating apparatus, either hot water or steam.

Heating Apparatus.—H. G. Lefiles, Union City, Tenn., wants latest and best heating apparatus. The Neubert Springs Hotel, Neubert Springs, Tenn., wants heating apparatus.

Hoisting Engine, etc.—The Piedmont Coal & Phosphate Co., Rock Springs, Fla., is in the market for a double-drum, double-friction hoisting engine of about fifteen horse-power, and two trolleys. Quote lowest cash price.

Ice Machinery.—Bids are wanted on ice plant of five to ten tons capacity, either new or first-class second-hand. Address P. S. Wise, P. O. Box 227, Buena Vista, Va.

Ice Machinery.—Messrs. Martin & Porter, Greenville, Ala., want estimates on a 5 to 15-ton ice plant.

Kaolin Machinery.—Charles Robert Jones, Ringgold, Ga., wants information regarding the mining and manufacture of kaolin, cost of machinery, etc.

Machinery.—The Savannah Tank & Supply Co.,

Savannah, Ga., will buy machinery. Address J. P. Williams.

Matcher.—H. T. Noel, Lancaster, Ky., wants a matcher.

Piping.—The Piedmont Electric & Water Supply Co., Piedmont, Ala., wants a quantity of 2½ and 4-inch wrought-iron pipe, second-hand, in good condition.

Piping.—The Orlando Water & Sewerage Co., Orlando, Fla., will soon be in the market for a few thousand feet of cast-iron mains, with necessary specials, etc.

Planing Mill.—Manufacturers of planing mill outfits might find it to their advantage to address J. W. Hebb, of Auburndale, Fla.

Planing Mill.—The Hope Lumber Co., Marshall, Texas, will need planing mill outfit.

Pulleys, etc.—Schorre Bros., Runge, Texas, are in the market for pulleys and shafting.

Pulverizer.—The Ridgemont Cement & Manufacturing Co., Montvale, Va., wants a second-hand pulverizer for hard rock.

Pump.—The Montgomery Brewing Co., Montgomery, Ala., wants a deep well pump; capacity from 125 to 150 gallons per minute.

Pumps.—Schorre Bros., Runge, Texas, are in the market for pumps.

Quarrying Machinery.—C. F. Z. Caracristi, Pembroke, Va., wants a full set of marble quarrying machinery, including saws.

Rails.—John R. Williams & Co., Arvonia, Va., are in the market for a carload of 12 and 16-pound steel T rails.

Roofing.—Schorre Bros., Runge, Texas, are in the market for corrugated iron roofing.

Roofing.—The Hope Lumber Co., Marshall, Texas, will need iron roofing.

Saws.—H. T. Noel, Lancaster, Ky., wants a planer, resaw, swing cut-off saw and rip saw.

Saw Mills.—Dr. Lafferty, Crozet, Va., wants information on improvements in saw mills.

Saw Mill Supplies.—J. M. Myers, St. Francis, Ark., will buy saw mill supplies.

Spoke Machinery.—A. F. Marbury, Cotton Plant, Ark., will buy spoke machinery.

Stave Cutter.—J. L. Beirne, Beirne, Ark., may buy a stave cutter.

Threshing Machine.—J. H. Vincent, Glenlock, Tenn., will want a threshing machine.

Water Works.—The city of Gallatin, Texas, wants a water-works plant. Address T. S. Vinson, recorder.

Wire Cable, etc.—The Piedmont Coal & Phosphate Co., Rock Springs, Fla., is in the market for 2,000 feet of steel wire and centre cable (1,000 ⅝, 1,000 ½) six buckets, clamps, sleeves, etc. Quote lowest cash price.

Messrs. Adair & Mitchell, of Little Rock, Ark., desire to secure the agency for a good line of agricultural implements, wagons and vehicles.

Mr. W. L. Black, of Fort McKavett, Texas, wants to correspond with manufacturers of cans.

The Cleveland Wheelbarrow & Manufacturing Co., Cleveland, Ohio, wants to correspond with manufacturers of small steel castings.

The Cumberland Mills, of Cumberland, N. C., desires to correspond with manufacturers of road wagons.

The Woodland Heights Co., of Houston, Texas, may purchase bridge material. Address J. R. Jeter.

SOUTHERN FINANCIAL NEWS.

New Banks.

Blocton, Ala.—The Blocton Savings Bank has been organized with Irby Morgan, Jr., of Birmingham, president, and J. B. Wadsworth, cashier. The capital stock is $25,000.

Brinkley, Ark.—C. B. La Belle reports that the majority of the stock for a savings bank with a capital of $25,000 has been subscribed.

Luverne, Ala.—James Folman, of Troy, will, it is stated, start a bank in Luverne.

Orange, Va.—The State Bank of Orange is the name of the bank lately mentioned. S. R. Nelson is president, and M. G. Field, cashier. It opened for business October 1.

Palatka, Fla.—The Putnam National Bank is being organized by G. L. Pace, W. B. Barnett and others, and it is expected to commence business by November 1. The capital stock is $50,000.

Russellville, Ark.—The Franklin County Bank has been chartered by Walter Moore, J. G. May and R. L. Williams. The capital stock is $50,000.

Wharton, Texas.—The Merchants' Bank, lately reported as commencing business, has a capital stock of $50,000. George W. Hayward is cashier.

Baltimore, Md.—The city is ready to pay the principal and interest of exempt loans amounting to $410,353.87 and the consolidated loan of $2,211,068.05.

Columbia, S. C.—The Laboring Men's Building and Loan Association has been chartered by T. L. Coltin, H. J. Keith and others.

Decatur, Ala.—The Alabama Kaolin & Mineral Co., lately noted, is arranging to issue $100,000 of bonds, but may sell treasury stock to the amount of $15,000 instead. The money is to be devoted to the development of the company's property.

Greenville, S. C.—The city contemplates issuing $15,000 of bonds for street paving. The mayor can give particulars.

Houston, Texas.—The Houston City Street Railway Co. has amended its charter, increasing capital stock.

Llano, Texas.—The city will issue $8,000 of school bonds.

Magnolia, Miss.—The issuance of school bonds is contemplated.

New Orleans, La.—The New Orleans City & Lake Railroad Co. has declared a quarterly dividend of $1.75 per share, and the New Orleans Water Works Co. a semi-annual dividend of $2 per share.

San Antonio, Texas.—The stockholders of the San Antonio & Aransas Pass Railway Co. meet December 15 to consider the issuance of 5 per cent. bonds to an amount not exceeding $16,800,000, or 4 per cent. bonds to an amount not exceeding $21,000,000. The increase of the capital stock from $5,000,000 to $12,500,000 will also be considered.

Washington, D. C.—The Mutual Serial Building Association has been organized with E. J. Butt, president.

Westminster, S. C.—The Westminster Savings Institution has declared a semi-annual dividend of 4 per cent.

TRADE NOTES.

The new mill company organized at Bozeman, Mont., has been incorporated under the name of the Bozeman Milling Co. The fight for their contract was a hot but friendly one between the heavy weight representatives of three of the largest mill furnishers, the contract finally going to Nordyke & Marmon Co., of Indianapolis, Ind. The mill when completed will have a capacity of 200 barrels per day. The equipments are very complete, and include an elevator of large capacity, with full line of machinery. The power is supplied by a Corliss engine furnished by Nordyke & Marmon Co.

After a very severe contest the bulk electric contract for the Betz office building in Philadelphia has been awarded to H. Ward Leonard & Co., of New York. In this handsome office building there will be between 3,000 and 4,000 lamps, and the plant will be a most modern one in every respect. Dr. W. A. Drysdale is the consulting electrical engineer for the work, and Mr. Alfred Wolff, of New York city, the consulting engineer on the steam work. The plant is to have slow motion dynamos directly coupled on the shaft of the engine. The plant when completed will be one of the handsomest in the United States.

Edward Barrath, formerly chief architect and superintendent of construction for Swift & Co., of Chicago, Ill., has severed his connection with that firm and entered into business under the firm name of Edward Barrath & Co. This new firm has had an extended experience in preparing plans, drawings and specifications for large plants and structures of various kinds, and will take charge of all details in the erection of buildings and machinery for slaughter-houses, coolers and cutting-rooms, cold-storage rooms, smokehouses, lard, tallow, oleostearine, greases and cotton-oil refining, glue factories, complete cotton-oil refineries, machine shops, tin shops, iron tanks and boiler shops.

The Lawrence Machine Co., of Lawrence, Mass., manufacturers of improved centrifugal pumping machinery, report the following list of recent sales: Lawrence Paper Co., Lawrence, Kan., one 6-inch class A pump; Richards Paper Co., South Gardiner, Me., four 1-inch phosphor bronze acid pumps; Perrin, Seaman & Co., Boston, Mass., one 3-inch class B and one 1-inch class B composition pumps; Morison-Allen Co., 145 Broadway, N. Y., one 6-inch class A and 6x5 vertical engine; Silver Spring Bleaching & Dyeing Co., Providence, R. I., two 3-inch class B pumps; Charles Kaestner & Co., Chicago, Ill., one 6-inch vertical pump and one 6-inch class A pump; Southworth Co., Mittineague, Mass., one 3-inch class B pump; Lisbon Falls Fibre Co., Brunswick, Me., one 3-inch class A bronze pump; Bangor Pulp & Paper Co., Basin Mills, Me., one 4-inch class A and two 3-inch class A pumps; Perrin, Seamans & Co., Boston, Mass., one 4-inch class B, one 1½-inch class B, two 6-inch class B and one 4-inch class B coupled with 4x4 vertical engine; Brown & Miller, Jersey City, N. J., one 4-inch class B coupled to 4x4 vertical engine; Manufacturing Investment Co., Madison, Me., one 5-inch class A brass pump; Franklin Paper Co., Holyoke, Mass., one 3-inch class A pump; Keeney Bros., Manchester, Conn., one 2-inch class A pump; Marinette & Menominee Paper Co., Marinette, Wis., two 2-inch class B perfection bronze pumps; Cumberland Manufacturing Co., Boston, Mass., one 8-inch class B pump coupled with 7x6 Junior Westinghouse engine; Holmes, Booth & Haydens, Waterbury, Conn., two 1-inch class B composition pumps; Emile Maertens, Providence, R. I., one 5-inch class A coupled direct to 6x6 vertical engine; G. L. Bosworth & Co., Holyoke, Mass., one 4-inch class B with 4x4 vertical engine and 4½-inch foot valve; Cushnoc Fibre Co., Augusta, Me., one 6-inch class B pump; York Haven Paper Co., Philadelphia, Pa., one 8-inch class A coupled to 8x8 vertical engine; Albion Paper Co., Holyoke, Mass., one 4-inch class A pump; Cliff Paper Co., Niagara Falls, N. Y., one 6-inch class B pump; Forest Paper Co., Yarmouthville, Me., one 3-inch class A and two No. 50 ejectors.

TRADE LITERATURE.

The Rocky Mount Improvement & Manufacturing Co. has issued a neat little pamphlet describing the town of Rocky Mount, N. C. The numerous excellent illustrations show the various manufacturing establishments located there, and also its business blocks, residences and the beautiful scenery surrounding it. The pamphlet or any information regarding the town will be furnished by the above company or Arrington & Arrington, real estate agents.

A. Whitney & Sons, of Philadelphia, Pa., have published a neat and valuable little pamphlet on the subject of contracting chills, in which, after an explanation of the necessity for chills being of uniform depth, is given the answers made by this firm to the inquiry of the committee on cast-iron wheels of the Master Car-Builders' Association. In these answers is embodied some interesting data as to the results obtained from the Whitney contracting chill and the work performed by the wheels.

Messrs. Dodge & Sons, patent attorneys, of Washington, D. C., have issued a beautifully designed pamphlet with the title "Inventive Progress." In this is described the benefits of the American patent system, and useful hints are given in regard to securing patents and copyrights. A number of photographs of prominent inventors are shown, and also some illustrations of notable inventions with a brief description. The pamphlet will prove of both interest to the prospective inventor and also to the general reader.

The Trevor Manufacturing Co., of Lockport, N. Y., has sent out their illustrated catalogue A of shingle, heading and stave machinery. This catalogue will be of great interest to lumbermen, showing, as it does, so many excellent machines for this class of work. Among other machines worthy of note is an improved veneer paring machine which, by means of a new rotary cutter, takes off sheets from one-sixteenth to three-sixteenths inch thick, and cuts them of any width or shape desired. Prices, weights and a great deal of useful information are given, and these, with the neat get-up of the catalogue, make it a valuable addition to the lumber workers' collection.

Catalogue No. 7 from the Clayton Air Compressor Works, No. 43 Dey street, New York city, gives illustrations and descriptions of the large variety of compressors made for different purposes. For rock drills, coal mining machines, submarine or other work these machines are well known, and their efficiency is well shown in the numerous letters given from engineers and others in the catalogue. A number of valuable tables of useful information are also given. Among the newer machines is noted one for compressing gases at all pressures up to 2,000 pounds per square inch. This machine is designed to replace the more cumbersome ones of German make generally used for this purpose.

Houston, Stanwood & Gamble, of Cincinnati, Ohio, have published a valuable little pamphlet entitled "A Ready Reference for Engineers and Steam Users," prepared by James B. Stanwood, M. E. This contains in condensed and handy form the formula and explanations of the many questions which arise daily in steam practice. Useful tables of the properties of steam, areas of circles, horse-power and diameter of shafting and sizes of chimneys, with horse-power of boilers, are also given. The many useful figures and convenient size of the pamphlet (4x8 inches, with 47 pages) will make this a most convenient means of carrying data in the pocket. The price is twenty-five cents.

The W. A. Crook & Bros. Co., of 121 Liberty street, New York city, has issued a very complete illustrated catalogue of the hoisting engines, boilers and contractors' supplies manufactured by them. Among other things of interest in the catalogue is an illustration of a lift bridge over the Harlem river operated by four 2-inch cables, carrying a weight of ninety-two tons, which is raised by means of a hoisting engine furnished by this company. Another illustration showing their cable system as used in constructing a large sewer is of interest. The material excavated in front is carried back and dumped over the completed work, thus making a great saving in handling. The large line of supplies and various uses are shown. The catalogue is neatly prepared and well indexed.

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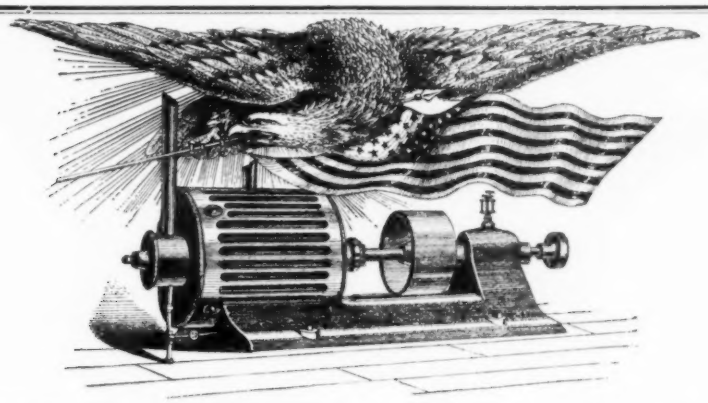

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The Board of Directors of this Company have this day declared the regular quarterly dividend of TWO PER CENT. on the Preferred and THREE PER CENT. on the Common Stock of the Company, both payable on the 1st day of November next at the transfer office of the Company, 135 Front St., this city. The transfer books will close Oct. 15 at 12 M., and reopen Nov. 2 next at 10 A. M. CHARLES DAVIS, Treas.

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PHILADELPHIA, September 28, 1892.

Notice is hereby given, that the Board of Directors has declared on the preferred stock of this Company a dividend of one dollar per share, payable in scrip at the office of the Treasurer, on and after October 28 1892, to the stockholders as registered at 3 o'clock P. M., on October 15 1892.

The transfer books will be closed from 3 o'clock P. M., October 15 1892, until 9 o'clock A. M., October 28, 1892. The dividend script, when presented to the Secretary of the Company in sums of $500, will be exchanged for debenture bonds maturing in 1912, or earlier, at the option of the Company, and bearing 5 per cent. interest, payable semi annually. A. J. HEMPHILL, Secretary.

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PROPOSALS.

UNITED STATES ENGINEER OFFICE, WILMINGTON, N. C., August 12, 1892.
Sealed proposals for dredging in Georgetown Harbor, S. C., will be received at this office until 11 A. M., October 20, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. W. S. STANTON, Major, Corps of Engineers, U. S. A.

UNITED STATES ENGINEER OFFICE, WILMINGTON, N. C., August 13, 1892.
Sealed proposals for stone and for brush mattresses in place in an extension of the jetty at North Island, Winyaw Bay, S. C., will be received at this office until 11 A. M., October 20, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. W. S. STANTON, Major, Corps of Engineers, U. S. A.

UNITED STATES ENGINEER OFFICE, WILMINGTON, N. C., August 12, 1892.
Sealed proposals for dredging in the Cape Fear River, N. C., below Wilmington, will be received at this office until 11 A. M., October 20, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. W. S. STANTON, Major, Corps of Engineers, U. S. A.

UNITED STATES ENGINEER OFFICE, WILMINGTON, N. C., August 12, 1892.
Sealed proposals for building an earth dyke at South Island, Winyaw Bay, S. C., will be received at this office until 11 A. M. October 20, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. W. S. STANTON, Major, Corps of Engineers, U. S. A.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., October 5, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 26th day of October, 1892, and opened immediately thereafter, for all the labor and materials required for the painting, polishing, decorative painting, including repairs to plastering, for the United States Custom House and Postoffice building at Cincinnati, Ohio, in accordance with the drawings and specification copies of which may be had on application at this office or the office of the Custodian at Cincinnati, Ohio. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposal for the Low-Pressure, Return-Circulation, Steam-Heating and Ventilating Apparatus for the U. S. Courthouse, Postoffice, &c., Building at Birmingham, Ala.," and addressed to W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., October 7, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 1st day of November, 1892, and opened immediately thereafter, for all the labor and materials required for the Trench Excavation, Foundations, Basement and Area Walls, Basement Columns and First Floor Beams for the U. S. Courthouse and Postoffice Building at Mankato, Minn., in accordance with drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at Mankato, Minnesota. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposal for the Trench Excavation, Foundations, Basement and Area Walls, Basement Columns and First Floor Beams for the U. S. Courthouse and Postoffice Building at Mankato, Minn.," and addressed to W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., September 17, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 14th day of October, 1892, and opened immediately thereafter, for all the labor and materials required for the erection and completion (except plumbing, gas-piping, heating apparatus, elevators, electric wiring and approaches) of the United States Appraiser's Warehouse at New York City, N. Y., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at New York City, N. Y. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any and all bids, or to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposals for the Erection and Completion (except plumbing, gas-piping, heating apparatus, elevators, electric wiring and approaches) of the United States Appraiser's Warehouse at New York City, New York," and addressed to W. J. EDBROOKE, Supervising Architect.

NOTICE.—Treasury Department, Office Supervising Architect, Washington, D. C., October 7, 1892. The time for opening proposals for erection, &c., U. S. Appraiser's Warehouse at New York City is hereby extended to 28th inst. W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., October 8, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 2d day of November, 1892, and opened immediately thereafter, for all the labor and materials required for the Trench Excavation, Foundations, Cut-Stone Work and Brick Work, Iron and Wood Floor, Ceiling and Roof Construction, Roof Covering, &c., for the U. S. Courthouse and Postoffice Building at Paris, Texas, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at Paris, Texas. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid if it be deemed in the interest of the Government to do so. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposal for the Trench Excavation, Foundations, Cut Stone Work and Brick Work, Iron and Wood Floor, Ceiling and Roof Construction, Roof Covering, &c., for the U. S. Courthouse and Postoffice Building at Paris, Texas," and addressed to W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., October 10, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 31st day of October, 1892, and opened immediately thereafter, for all the labor and materials required for the erection and completion of a Stable at the U. S. Marine Hospital, Chelsea, Mass., in accordance with the drawing and specification, copies of which may be had on application at this office or the office of the Superintendent at Chelsea, Mass. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any and all bids and to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, Proposal for the erection and completion of a Stable at the U. S. Marine Hospital, Chelsea, Mass., and addressed to W. J. EDBROOKE, Supervising Architect.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., September 30, 1892. SEALED PROPOSALS will be received at this office until 2 o'clock P. M. on the 25th day of October, 1892, and opened immediately thereafter, for all the labor and material required for the low pressure return-circulation, steam heating and ventilating apparatus for the United States Courthouse, Postoffice, &c., Building at Birmingham, Alabama, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at Birmingham, Ala. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids, or to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked "Proposal for the Low-Pressure, Return-Circulation, Steam-Heating and Ventilating Apparatus for the U. S. Courthouse, Postoffice, &c., Building at Birmingham, Ala.," and addressed to W. J. EDBROOKE, Supervising Architect.

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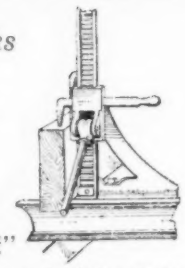
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1 " 32x32 in. x 10 ft 42x36 in. x 12 ft.
1 " 36x28 in. x 10 ft.
1 " 44x44 in. x 22 ft. and 50x50 in. x 17 ft.
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Friction Shapers, 15 in., 22 in., 32 in
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Johnson & Overshiner, Hopkinsville, Ky.
T. H. Meehan, Louisville, Ky.
J. G. Evans & Co., Moorehead, Ky.
Tippett & Co., Moorehead, Ky.
Edward Farley, Paducah, Ky.
Lester & Little, Sloans Valley, Ky.
Pinnell & Webb, Somerset, Ky.
George D. Eike, New Orleans, La.
E. O. Felton, Ronceverte, W. Va.
J. Beckwith & Co., Waverly, W. Va.

Railroad Ties.

W. J. Felt, Greenup, Ky.
G. & A. Kopp, Louisville, Ky.
Southern Tie & Lumber Co., Louisville, Ky.
James S. Pope, Halls, Md.
P. L. Conquest & Co., Norfolk, Va.

Spokes and Handles.

Jacob Wise & Son, Fulton, Ky.
Paducah Handle Works, Paducah, Ky.
Hendersonville Mfg. Co., Hendersonville, N. C.
Rutherf'dton Sp. & Hdl. F'y, Rutherfordton, N. C.
C. J. Dundas, Statesville, N. C.
Thomasville Spoke Works, Thomasville, N. C.
Johnson Bros., Brownsville, Tenn.

Southern Real Estate Directory.

For the convenience of the many readers of the MANUFACTURERS' RECORD it has been deemed advisable to collect under this head a reliable list of Realty Agencies of the Southern States. The value of such a list for the purpose of Ready Reference will immediately become apparent to all who are interested in the growth of this section.

DISTRICT OF COLUMBIA.

WASHINGTON, D. C.—**Chas. A. McEuen**, Real Estate, Loans and Insurance. 1420 F. St.

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SAVANNAH—**Jackson & Whatley**, Counselors at Law. Real Estate and Collection Department. W. G. Woodfin, manager.

NORTH CAROLINA.

ROCKY MOUNT—**Geo. S. Sartin**, Town Lots, Acre Property, Farms.
NORTH WILKESBORO—**W. F. Trogdon**, Town Lots and Farm Lands.
OLD FORT—**O. H. Blocker**, Real Estate, Timber and Mineral Lands.
RALEIGH—**J. M. Broughton & Co.**, Real Estate, city and country realty.
ROCKY MOUNT—**Arrington & Arrington**, Real Estate. Correspondence invited.
STATESVILLE—**P. C. Carlton**, Real Estate, Timber and Mineral Lands.
WINSTON—**E. R. Amis**, Real Estate. First-class investments a specialty.

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COLUMBIA—**Geo. W. Parker & Co.**, Real Estate and Insurance. Loans Negotiated.
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TENNESSEE.

MEMPHIS—**Hodge & Bro.**, 59 Madison St., Real Estate Agents and Dealers.

VIRGINIA.

CHARLOTTESVILLE—**J. C. McKennie & Co.**, Real Estate and Insurance Brokers.
NEWPORT NEWS—**W. E. Barrett & Co.**, Real Estate & Ins. Correspondence solicited.
NEWPORT NEWS—**Cottrell Company**, Real Estate. Correspondence invited.
NORFOLK—**A. W. Cornick & Co.**, Real Estate Agents, 102 Main Street.

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These mines are of ancient discovery and were worked with great profit for a long period, being only abandoned on account of political troubles before and after the war of liberation.

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These mines are so richly endowed with auriferous material, from the easily-worked sand gravel and dirt (carrying virgin dust and nuggets) to the fissure veins of free milling quartz, that when properly equipped a profit of ten thousand dollars ($10,000) a day or over three million dollars ($3,000,000) annually is a very low and conservative estimate.

There is an abundance of timber and unfailing water power, with a genial and healthy climate.

It is proposed to organize this property on a basis of five million dollars ($5,000,000), upon which there can be dividends earned of 60 per cent. or more, and the parties furnishing the original capital in small or large sums for this organization, which will be about twenty-five thousand dollars ($25,000) will be let in on a basis of two and a half cents (2½c.) on the dollar, with the privilege of purchasing pro rata at five cents (5c.) on the dollar, a sufficient amount to give them a controlling interest if they so desire.

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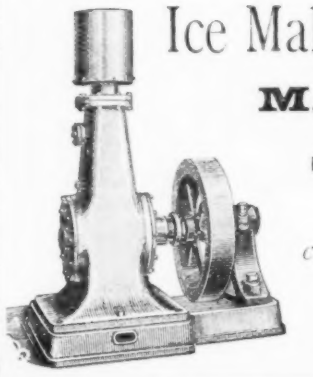

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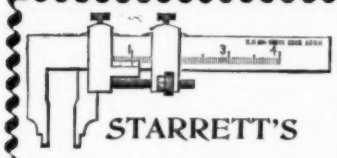

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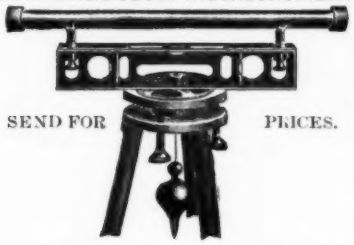

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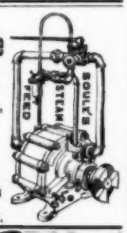

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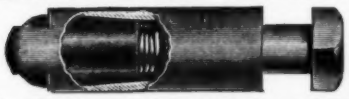

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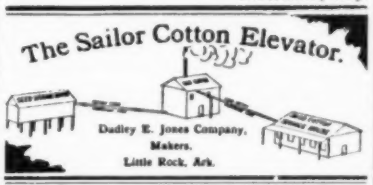

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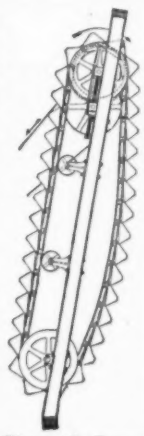

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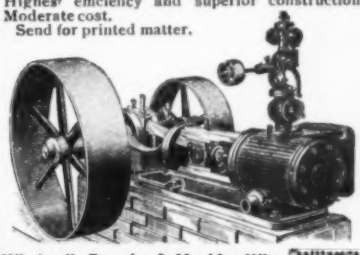

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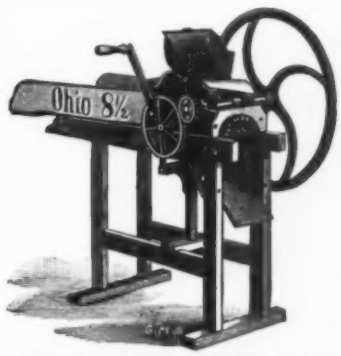

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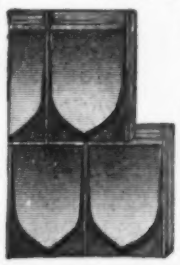

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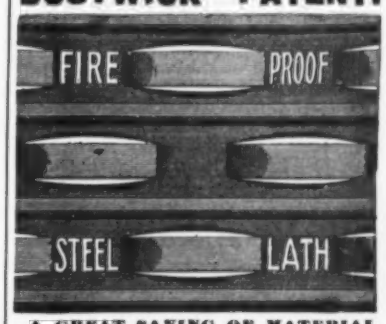

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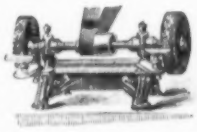

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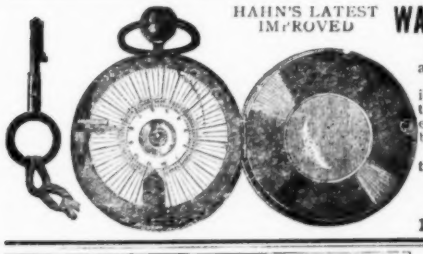

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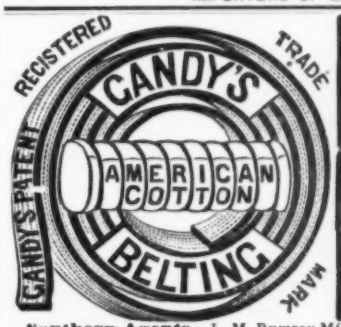

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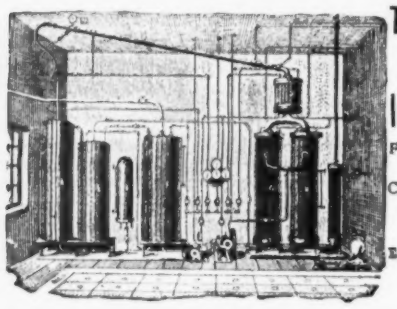

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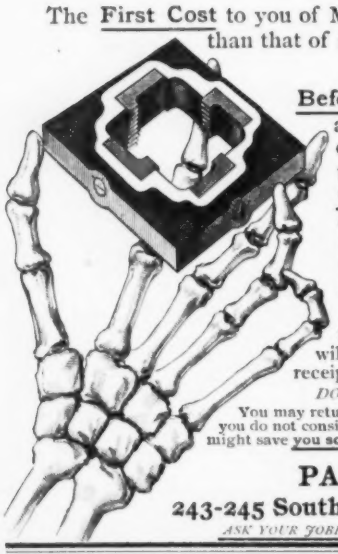

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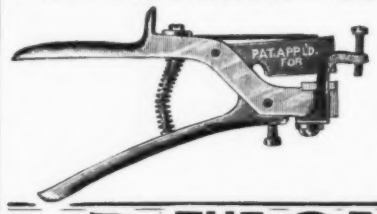

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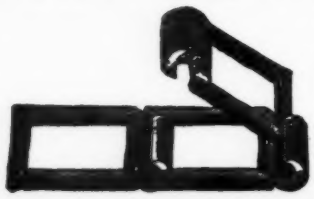

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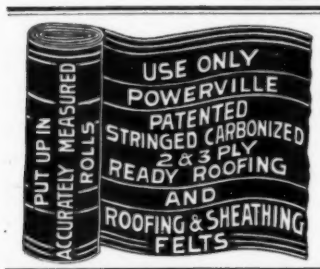

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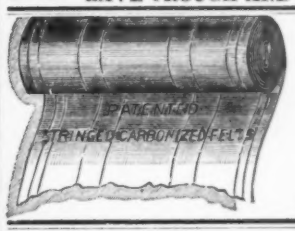

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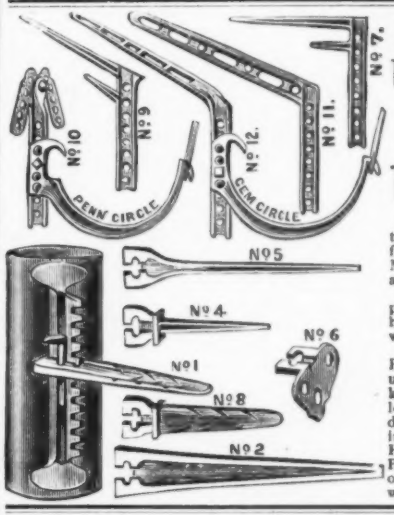

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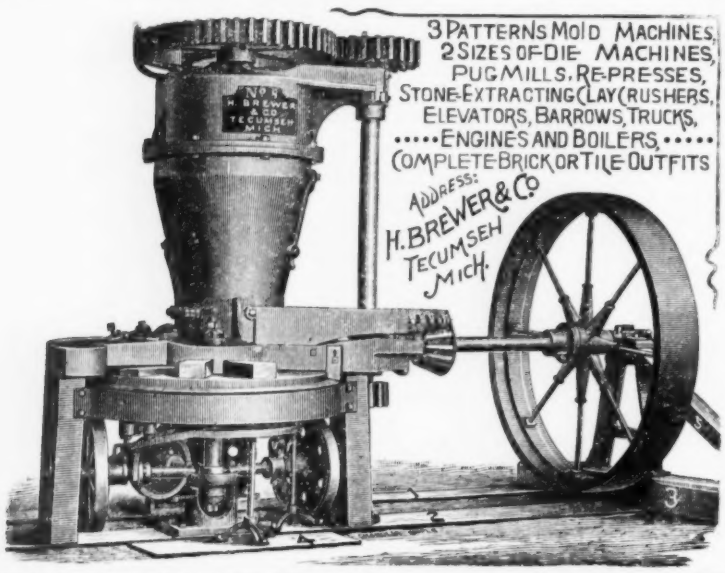

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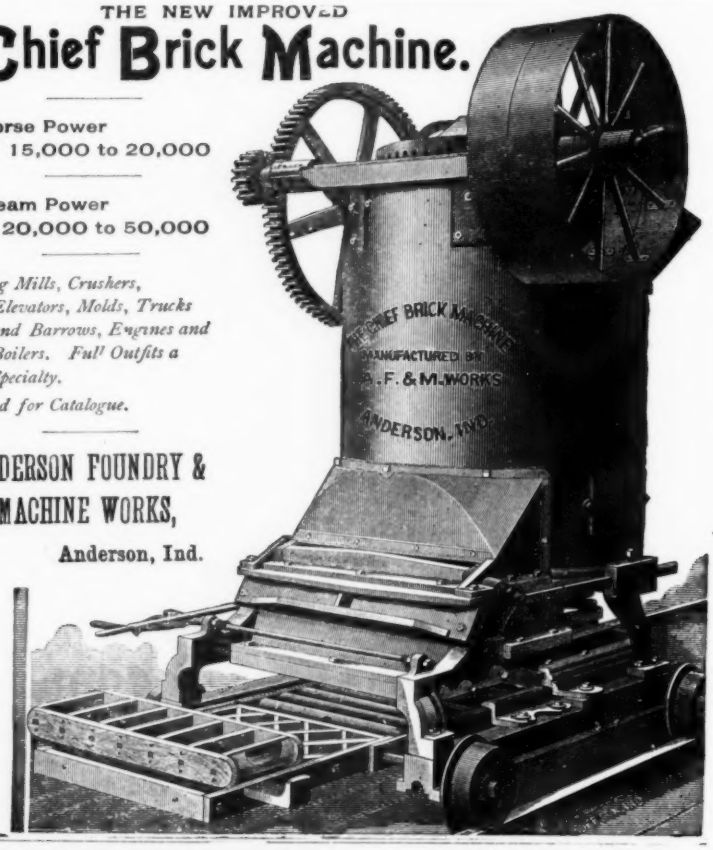

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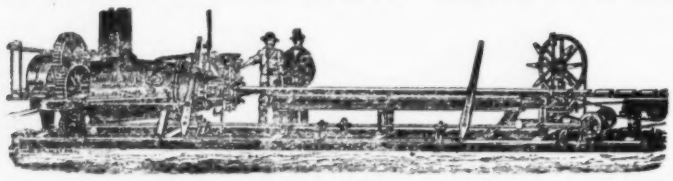

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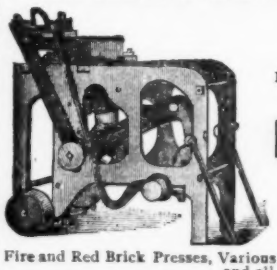

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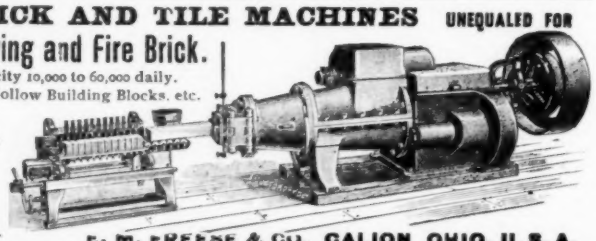

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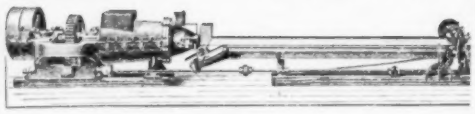

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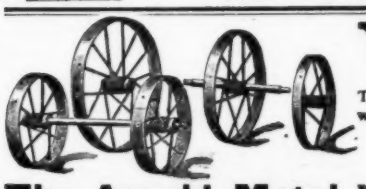

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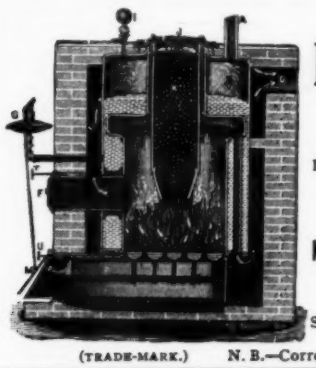

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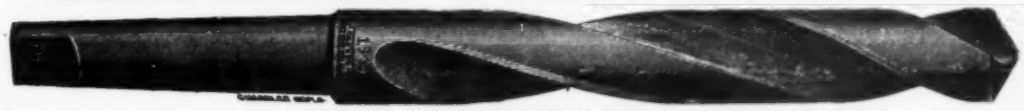

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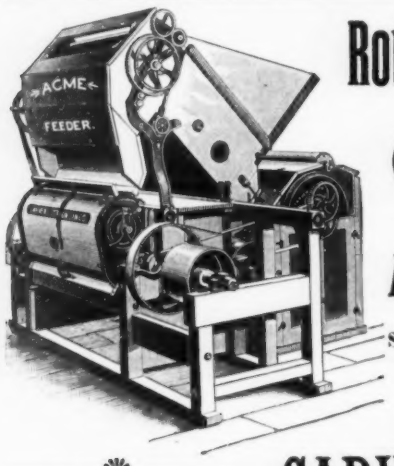

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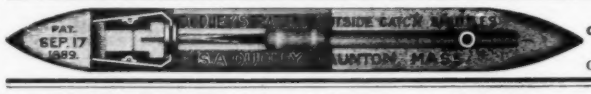

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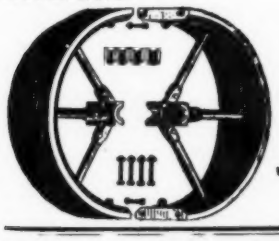

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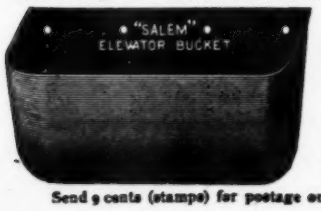

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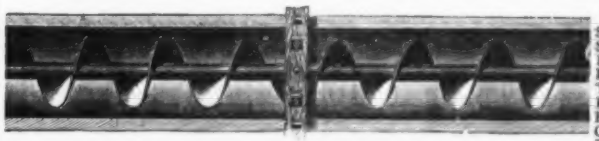

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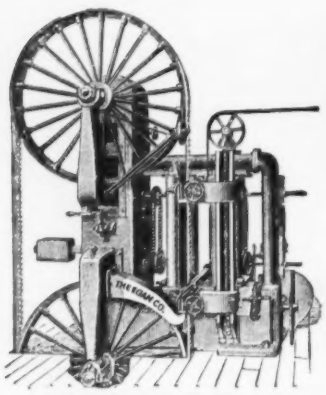

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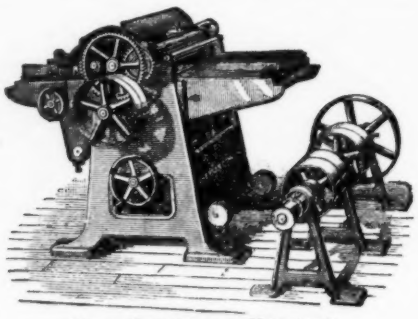

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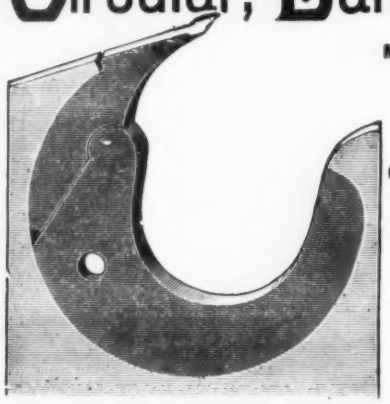

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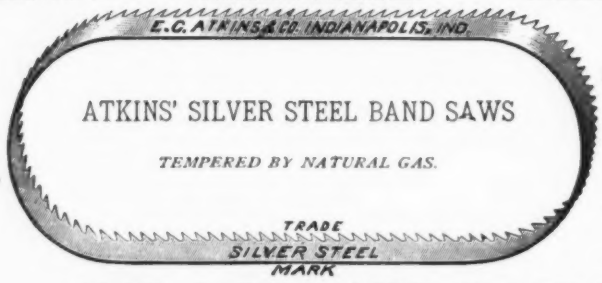

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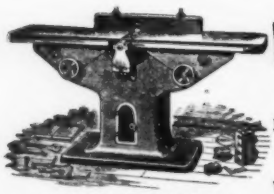

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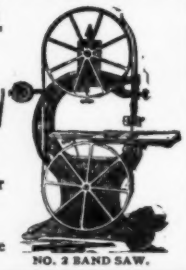

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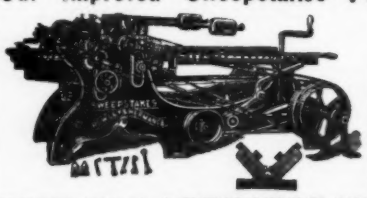

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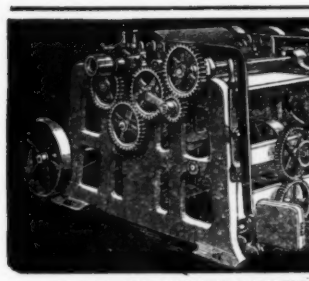

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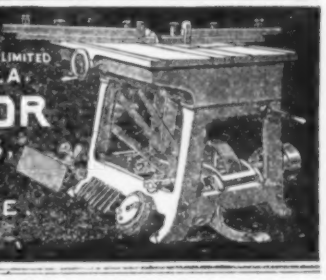

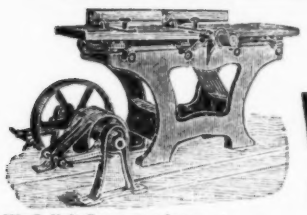

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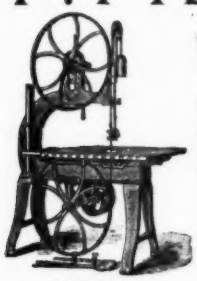

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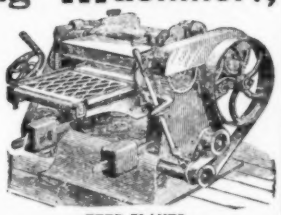

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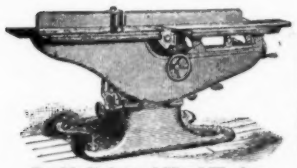

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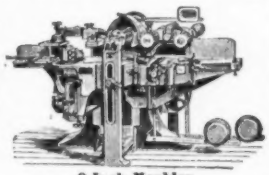

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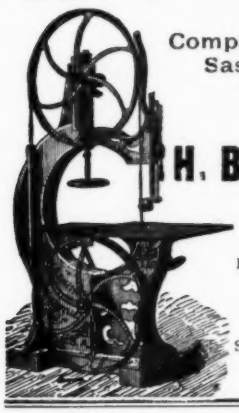

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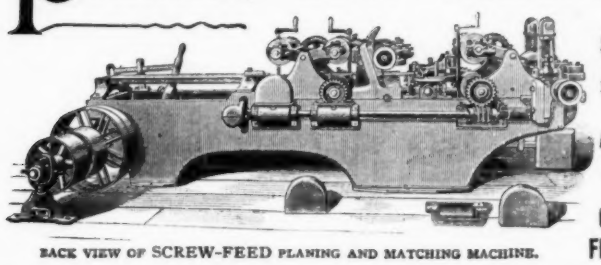

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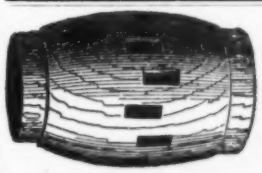

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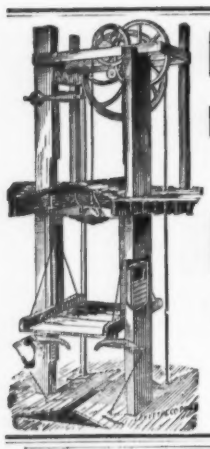

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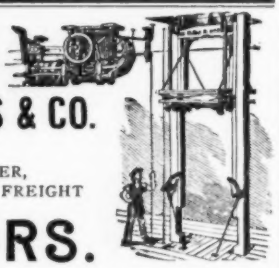

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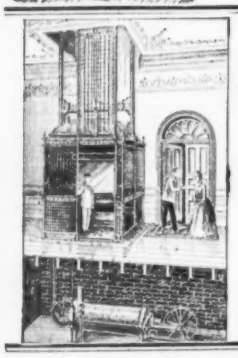

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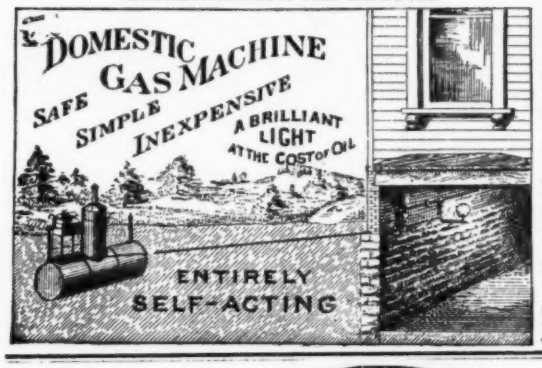

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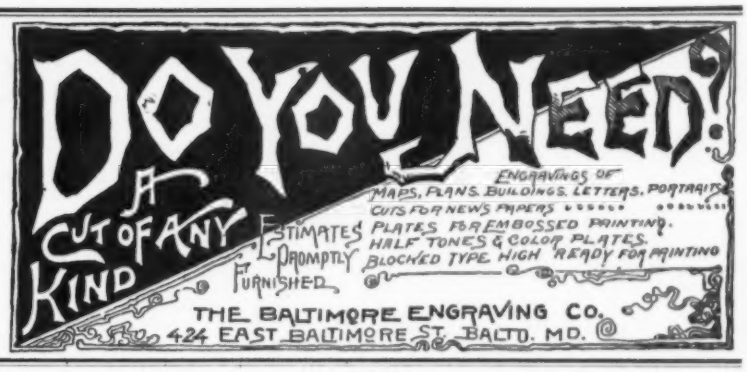

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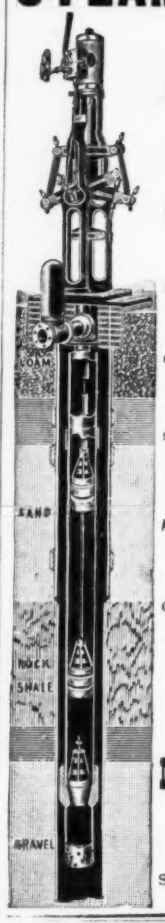

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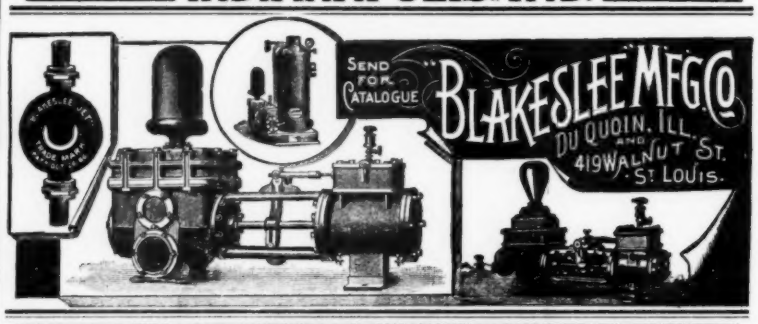

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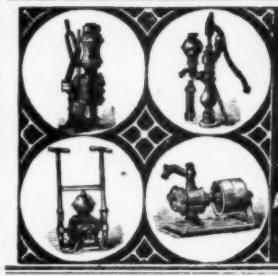

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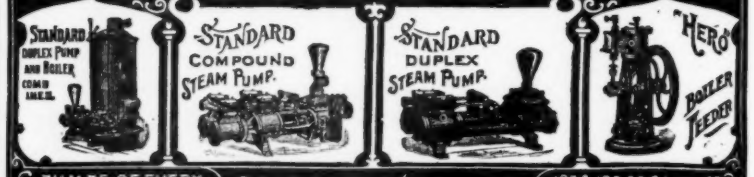

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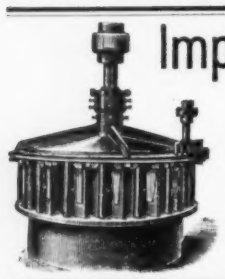

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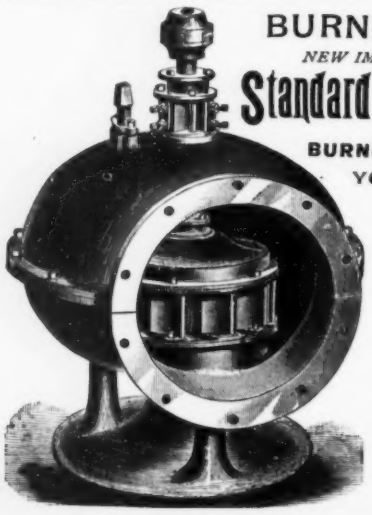

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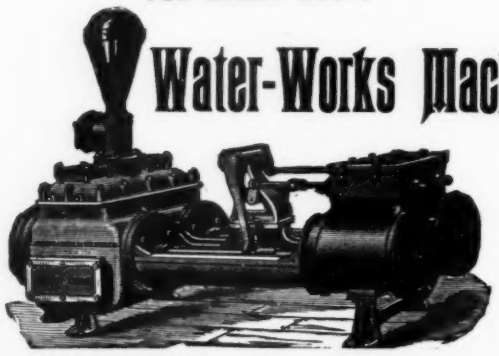

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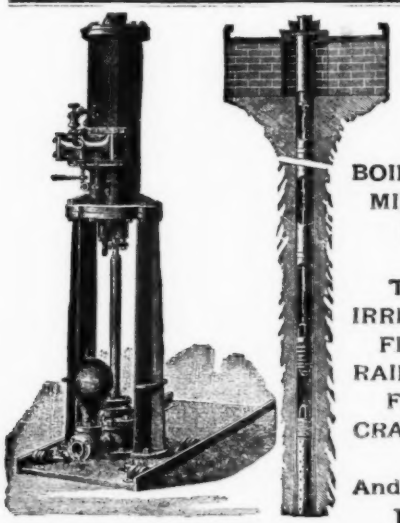

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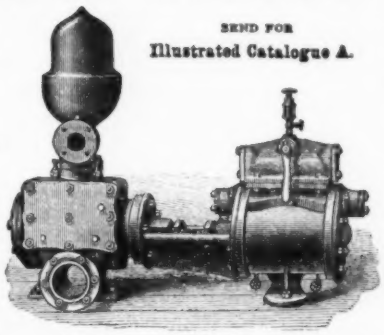

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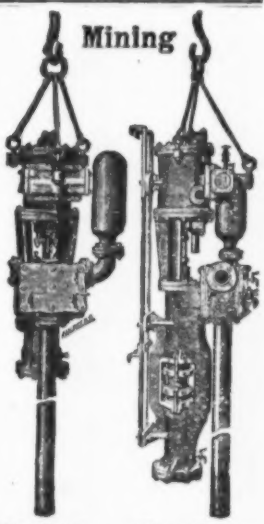

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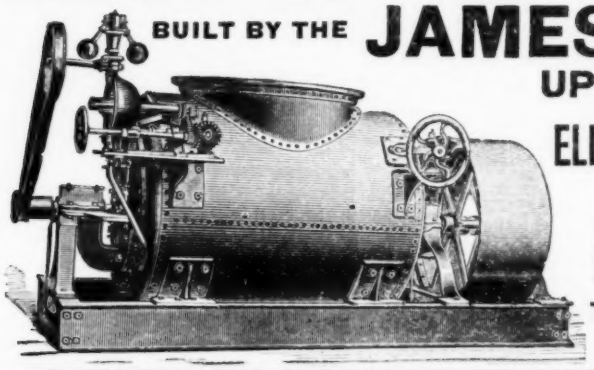

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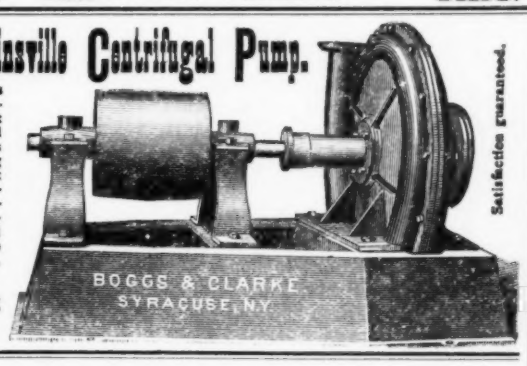

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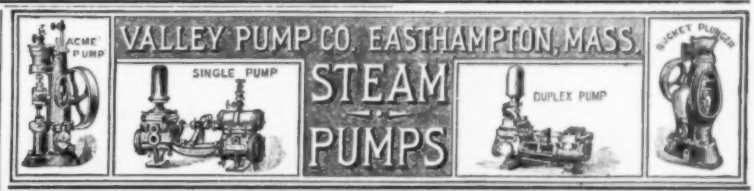

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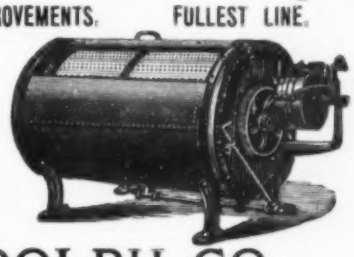

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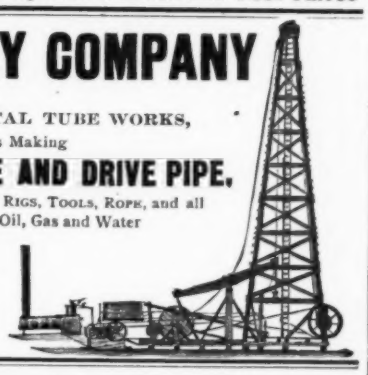

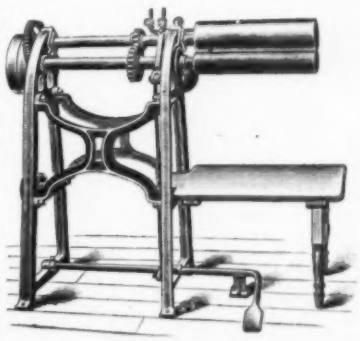

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Contemplating a move South should "look up" Columbus City, Ala. Its natural resources make it the ideal spot of the South for an industrial city. Its promoters will deal as liberally with manufacturers as nature has dealt with the city.

If you are contemplating a move South, place yourself in communication with the Southern Industries Co., agents for Columbus City Mining, Manufacturing & Development Co., 1 Beacon Street, Boston; 88 Pulitzer Building, New York City; 152 La Salle Street, Chicago; 617 14th Street, Washington; 504 Richardson Building, Chattanooga, Tenn.; 673 Elm Street, Manchester, N. H.; 107 Olive Street, St. Louis, Mo.

Enterprises to locate at Columbus City: $100,000 National Bank, capital all paid in; Smelting Furnace—Weaver & Rogers Co., Chicago, Ill.; Car Works—Harris Car Co, Woolen Mills—Reynolds Bros., Davisville, R. I.; Brick Manufacturing Co.—Messrs. Baker, Cavanaugh & Verrill, Holyoke, Mass.; Electric Light Company—Gatcomb Bros. & Co., Milling and Supply Co.—C. C. Milling & Supply Co., Furniture Factory—G. H. Stevens & Co., Chicago, and contracts closing with other industries daily.

THE SOUTH BALTIMORE HARBOR & IMPROVEMENT COMPANY.

THE SOUTH BALTIMORE HARBOR & IMPROVEMENT CO. is the owner of about 1,500 acres of land and five miles of water front adjoining the city of Baltimore, on the south side of the Patapsco river.

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The land is beautifully located, running from the water's edge, gradually to a height of about 200 feet; is free from malarial influences, and is generally considered one of the healthiest locations adjoining the city.

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The center of the water front consists of the famous land-bound harbor of Curtis Bay, with an average depth of water of 25 feet.

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The advantages of this locality for manufacturing purposes cannot be over-estimated. The best proof of this assertion is that capitalists have within the last few years selected it in preference for large manufacturing enterprises, such as a Sugar Refinery, Barrel Factory, Car Works, Foundry, Nut and Bolt Manufactory, the Ryan-McDonald Machine Shops, which were removed from Waterloo, N. Y.; the Beckwith Rolling Mills, which were removed from Paterson, N. J., besides others now in contemplation of erection.

LABOR.

The great advantage of this place as to labor, is the town of SOUTH BALTIMORE, adjoining the factories, containing hundreds of substantial brick houses, for the employees of these various works. (There are now being built by the Company, as well as by others, blocks of houses, in addition to the above.)

BALTIMORE & OHIO R. R. CO.

The Baltimore & Ohio Railroad runs through this property, and has a terminus at Curtis Bay.

ELECTRIC RAILWAY.

An Electric Railway is now completed from the City of Baltimore to the Sugar Refinery (near the southern limits of this property), the fare upon which will be only five cents, the cars to be run every ten minutes, and thereby making it a part of Baltimore City, as well as easy of access at all hours.

CHURCHES.

The town contains a Presbyterian, a Catholic, a Methodist, a Baptist and an Episcopal Church.

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Capitalists and Builders to erect houses in this growing town, both for sale or to rent, will find a rare opportunity for investment; as the demand for houses is greater than the supply.

The Company will sell or lease water fronts, or lots for manufacturing and for dwelling purposes, at moderate rates.

Manufacturers will find it to their interest to examine this property before locating elsewhere.

For particulars and prices, apply to

WILLIAM S. RAYNER, President,

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MANUFACTURERS!

DO YOU wish a better location for your plant than the one you occupy at present?

DO YOU desire factory sites and buildings erected after your own plans and specifications as a donation?

WE OFFER YOU a choice of locations in ILLINOIS, OHIO, INDIANA, &c. also in the cities of CHICAGO, MILWAUKEE, ST PAUL, DULUTH, &c, with lowest freight rates to and from all points.

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WRITE FOR PARTICULARS

YOUR BUSINESS WILL BE TREATED CONFIDENTIALLY AND PROMPTLY.

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Highest grade Instruments manufactured. Endorsed and preferred by the best schools and musical authorities. Only Upright Piano on the market to day equal to the Grand. Reasonable terms. Old pianos taken in exchange. Pianos for rent. A large assortment of Organs constantly on hand. Send for illustrated piano and organ catalogue. Inducements on second-hand Pianos.

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THROUGH COACHES to the OHIO RIVER, and THROUGH CONNECTIONS to PITTSBURGH

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20 Miles Shorter than any other line between Pittsburgh and Cleveland.

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Three trains each way between Cleveland and Canton.

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The line of the QUEEN & CRESCENT ROUTE through KENTUCKY, TENNESSEE, ALABAMA, MISSISSIPPI, and LOUISIANA

OFFERS GREATER OPPORTUNITIES TO

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than any other part of the U. S., vast bodies of

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Also THOUSANDS OF ACRES OF LONG LEAF YELLOW PINE for sale cheap.

This road runs through the thriving towns of Lexington, Danville, and Somerset, Ky.; Rockwood, Harriman, and Chattanooga, Tenn.; Ft Payne, Attalla, Birmingham, and Tuscaloosa, Ala.; Meridian, Hattiesburg, Jackson and Vicksburg, Miss.; New Orleans, Delhi, Monroe, and Shreveport, La. Some of the new towns will donate money and land to locate Manufacturing enterprises.

The R. R. Co. will make low rates for Passengers and Freight, and afford investors every opportunity to examine the different localities. If necessary, will send a representative with the party.

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Q. & C. Route. CINCINNATI, O.

RICHMOND AND YORK RIVER LINE.

On and after MONDAY, February 29, 1892, the steamers of this line leave Baltimore daily (Sunday excepted) at 5 P. M. for West Point, Richmond and the South, arriving at Richmond at 9.10 A. M., connecting with trains of the Richmond & Danville System. Steamer leaving Mondays, Wednesdays and Fridays calling at Gloucester Point and Allmond's Wharf; steamer leaving Tuesdays, Thursdays and Saturdays calling at Yorktown and Clay Bank. Through tickets and bills of lading issued to all points of the Richmond & Danville System. Way freight must be prepaid. Fare to Richmond, first class, $2.00, second class, $1.50. Tickets sold and baggage checked at Geigan & Co.'s, 205 East Baltimore Street.

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Fortress Monroe, Norfolk and the South.

The Bay Line comprises the New and Elegant Steamers

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All the Comforts and Luxuries of a First-Class Hotel are afforded the traveler. Spacious and Elegant Saloons and and Staterooms, furnished with an especial view to comfort. Unsurpassed Cuisine, which is made a specialty with this Line. Elegant service and courteous attention. Steamers leave Baltimore daily (except Sundays) at 9 P. M.

At Old Point Comfort is located the SPLENDID HYGEIA HOTEL, a Delightful Resort at all Seasons of the Year. For Tickets and information apply at Company's office,

157 W. BALTIMORE STREET, BALTIMORE.

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S.S. Maine, 4,150 tns.

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MERCHANTS & MINERS' Transportation Company.

Steamers sail from Baltimore, Md., TO BOSTON, Mass., VIA NORFOLK, every TUESDAY, THURSDAY and SATURDAY at 2 P. M.

FARE—First-Class, $10.00 Round Trip, $20.00. Second-Class $8.00.

FOR PROIDENCE, R. I., every TUESDAY and THURSDAY at 2 P. M.

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Baltimore TO JACKSONVILLE, Fla.—First class, $20.65; round trip, $36.30; steerage, $12.50.

All tickets include meals and stateroom accommodations. Through tickets sold and baggage checked to all points South.

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S.S. ISTRIAN.....4,000 tons
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The Only South Atlantic Direct Line to European Ports.

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Commencing September 30th, 1892, the following Steamships will make regular sailings from Brunswick, Ga., to Liverpool and Bremen:

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WIVENHOE,	1893	CLARK.
HAY-GREEN	1869	BLACKLAW,
J. M. LOCKWOOD,	1772	JENKINS,
STORRA-LEE,	1734	BAILEY,
DEERHILL,	1733	BAINBRIDGE.

Additional Steamships will be placed on the line as business warrants.

S. S. DEERHILL will sail from Liverpool for Brunswick September 1st.

S S. HAY-GREEN will sail from Brunswick for Liverpool September 30th.

Consignments solicited to all points in United Kingdom and Continent of Europe.

For Freight, Passage and general information apply to

THE BRUNSWICK TERMINAL CO.

General Agents, BRUNSWICK, GA.

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POPULAR AND DIRECT ROUTE.

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For Old Point Comfort, Norfolk and the South.

Steamers leave daily (except Sunday) Union Dock 6.30 P. M., Canton Wharf 7 P. M.; arrives Old Point Comfort 7 A. M., at Norfolk at 8 A. M., Portsmouth 8.15 A. M. At OLD POINT COMFORT connect with CHESAPEAKE & OHIO RAILROAD for Richmond, Charlottesville, Greenbrier, White Sulphur Springs, Louisville, Cincinnati and all points West. At NORFOLK with NORFOLK & WESTERN RAILROAD for Petersburg, Richmond, Lynchburg, Roanoke, Bristol, Knoxville, Chattanooga, Memphis and the Southwest; also with the NORFOLK SOUTHERN RAILROAD for Elizabeth City, Edenton and Eastern North Carolina. At PORTSMOUTH, VA., with SEABOARD & ROANOKE RAILROAD for Weldon, Raleigh, Southern Pines, Pine Bluff Health Resort, Peachland, Mount Holly, Charlotte, Fayetteville, Newberne, Wilmington, Charleston, Columbia, Augusta, Savannah, Jacksonville and all PRINCIPAL SOUTHERN CITIES.

Palace Steamers, Unsurpassed Cuisine, Undisturbed Night's Rest. Sure Connection.

For tickets and information apply at Company's Office, 120 E. Baltimore Street, or on board steamers.

E BROWN G.T.A. KENYON JONES, Agt.

NORTH WILKESBORO,

NORTH CAROLINA,

One of the Conspicuous Successes of the Year in Town Building, Presents the Following Record:

Population March 4, 1891, actual count, 48.
Population March 4, 1892, actual count, 348.

Gain in one year 625 per cent.

Townsite purchased November 11, 1890; act of incorporation passed by the Legislature, March 4, 1891; first lot sold at private sale, May 12, 1891. Within the first year of its existence ten miles of streets have been graded, and $22,000 spent in public improvements. Where prior to March 4, 1891, there was only a farm settlement without pretensions to being even a village, there is to-day a thriving, busy, growing, trading and manufacturing center, with

A Large Well-Kept Hotel,
The Bank of North Wilkesboro, $40,000 Capital,
A large Livery and Sale Stable,
Two Large Wholesale Stores,
One Hardware Store,
One Furniture Store,
Ten General Merchandise Stores,
Three Saw Mills, Sash and Blind Factories,
One Foundry and Machine Shop,
A Handsome, Well-Edited, Home Print Newspaper, The North Wilkesboro News,
One School,
Two Churches Under Way,
Two Brick Yards in operation, and a number of other enterprises practically secured.
Arrangements are about completed for a Woolen Mill.
A large iron front brick block, containing Bank Building, two Store Rooms, Opera House, and Printing Office; A graded School Building and an Iron Bridge across the Yadkin River, in the Eastern part of town, will be completed during the spring and summer.
Turnpike roads to Tennessee and Virginia are about completed; county roads leading into town are being improved and numerous good new ones built, with the intention of making this the center for all the wagon trade of this section.
A tobacco warehouse for the sale of the high grade leaf of this district will be built during the summer, so as to give a home market for the tobacco crop that will be grown this year.

Compare this record with that of any other new tow you have heard of during the past dull season.

NORTH WILKESBORO,

Is 75 miles west of Winston-Salem, at the present terminus of the Northwestern North Carolina Railroad, which when ultimately completed to Bristol, Tenn., will give the shortest route between Norfolk and Cincinnati. North Wilkesboro is the most important trading point between Winston-Salem and Bristol, and is in the center of the great undeveloped mineral and timber district of Northwestern North Carolina, being by United States Postal Map on an air line 75 miles southeast of Bristol, 45 miles east of Cranberry, N. C., 40 miles north of Statesville, 45 miles northeast of Hickory, 90 miles northeast of Asheville, 45 miles southeast of Mt. Airy, and 80 miles south of the Norfolk & Western Railroad, in the valley of the Yadkin, between the Brushy Mountains on the South and the Blue Ridge on the North. Climate, healthfulness, water, drainage and location unsurpassed by any town in North Carolina.

The townsite consists of 1,088 acres, located, by the way on a farm originally owned by General John B. Gordon's grandfather. The first public auction sale of lots was held December 2, 1891, and 188 lots were sold. Purchasers have in many cases been able to resell at a handsome profit. The company has sold 50 lots at private sale since then, on many of which houses are now being erected. It is a significant fact that among the business buildings erected a large per cent. are substantial brick structures, while for architectural beauty and cost many of the residences are much superior to those usually found in a town so young.

At the second auction sale, May 11th, 1892, 35 business lots and 44 residence lots sold for $16,490, an average of $8.35 per front foot, which is $2.53 per front foot (or 44 per cent.) more than the average at the sale last December, which was the best sale made in North Carolina during last year. Since the sale, a contract has been closed for the location of another large saw mill, plaining mill, sash, door and blind factory combined, which will do a large shipping business. A contract is closed for the location of extract works with a capital stock of $300,000. The plant will cost $125,000 and will cover six acres of land. Twelve families from the North will move down. The company will erect a large electric-light plant in connectton with the extract works. North Wilkesboro will get there and will not be long doing so.

Through the townsite runs a stratum of serpentine stone, 200 feet in width, and also a bed of iron ore equal in quality to that of Cranberry. The Town Company also owns 4,100 acres of mineral, granite and timber lands in Wilkes County. It is probable that the work of developing the great mineral and timber interests of the section will be commenced in a short time, and on an extensive scale.

Sites will be donated and stock subscribed to such manufacturing enterprises as may be advantageously located here.

The policy of the Company is a most liberal one in this respect, it being determined to aid all legitimate enterprises to any reasonable extent. There are 328 miles of water courses within the borders of Wilkes County, furnishing to the vicinity of North Wilkesboro a water power as great as Fall River. The climate, while not moist, is neither harsh nor dry, and is especially suitable to the spinning of fine cotton yarns, such as cannot be made in the extreme South or North. There is also a fine opportunity here for bleacheries, to the establishment of which at Southern points there is a tendency at present. As they can't go where sluggish streams, impregnated with vegetable matter, abound, the quick flowing streams of clear mountain water, so numerous about North Wilkesboro, afford everything desired. Numerous other industries will do well at North Wilkesboro, and will be most substantially encouraged to locate there.

Capitalists, Home Seekers, Health Seekers, Manufacturers of wood and iron, and many other industrial workers may well investigate North Wilkesboro's advantages.

The above-described townsite and other property belongs to the Winston Land & Improvement Co., which was chartered by act of Legislature, session of 1887; ratified March 4, 1887, chapter 82. Authorized capital $1,000,000. Present capital stock $125,000, all subscribed and paid up.

OFFICERS—G. W. HINSHAW, President, of Hinshaw & Medearis, Wholesale Merchants; Vice-President People's National Bank, Winston, N. C. DR. W. L. BROWN, Vice-President, of Brown Brothers, Tobacco Manufacturers, Winston, N. C. W. F. TROGDON, Secretary and Treasurer, North Wilkesboro, N. C.

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ATTORNEYS—T. B. FINLEY, ESQ., North Wilkesboro, N. C. HON. C. B. WATSON, Winston, N. C. HON. J. C. BUXTON, President First National Bank, Winston, N. C. HON. W. W. BARBER, Wilkesboro, N. C.

PLATS, PRICES AND ANY DESIRED INFORMATION PROMPTLY FURNISHED ON APPLICATION TO

W. F. TROGDON, Secretary and Treasurer, - - NORTH WILKESBORO, N. C.

As A LOCATION for Manufactures

Of Iron and Wood and for General Industrial and Business Enterprises,

FRONT ROYAL, VA.

INVITES INVESTIGATION.

Its location, at the junction of the Norfolk & Western Railroad (Shenandoah Valley line) and the Richmond & Danville's branch, give it excellent transportation facilities. It is only a few hours' ride distant from Washington. The Norfolk & Western's direct line to Washington will be built from Front Royal.

There is no Finer Agricultural Country in the World than the Famed Shenandoah Valley, in which Front Royal is Located.

A WIDE RIVER WITH SWIFT CURRENT FURNISHES WATER POWER AND MAKES DRAINAGE PERFECT.

Front Royal is a Prosperous Town, with an Extensive Mercantile Business and Many Manufacturing Enterprises in Operation and Under Construction.

INVESTIGATION OF ITS ADVANTAGES IS INVITED BY THE

Front Royal---Riverton Improvement Company,

FRONT ROYAL. VIRGINIA.

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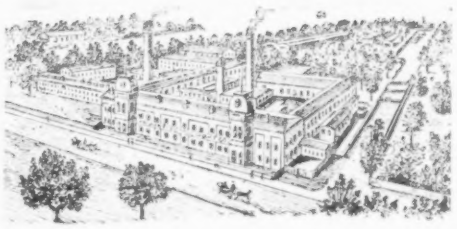

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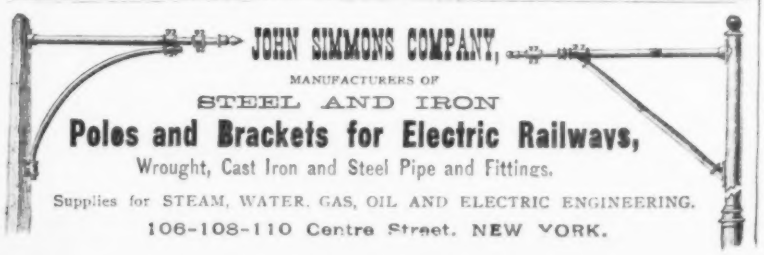

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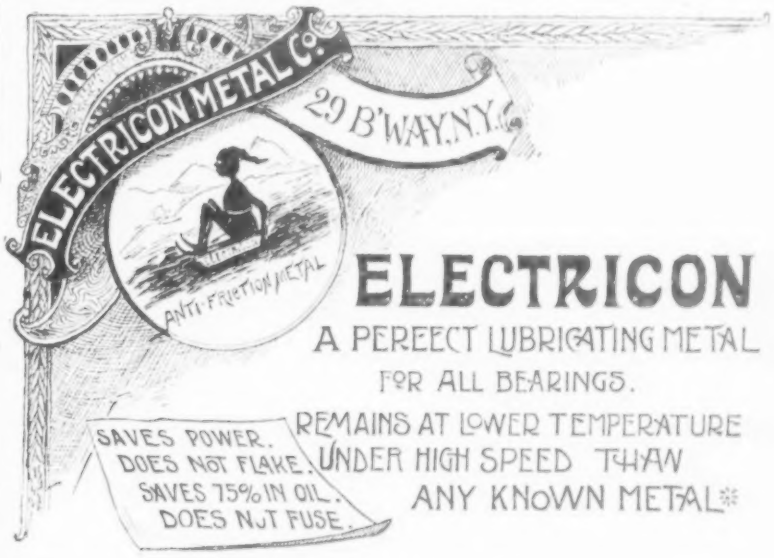

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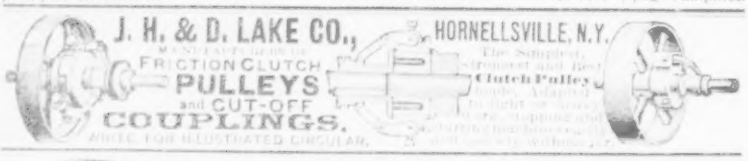

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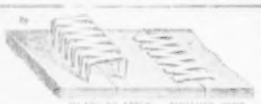

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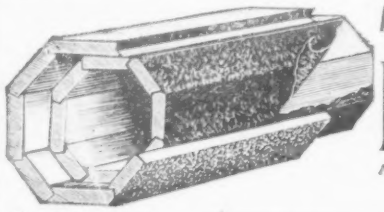

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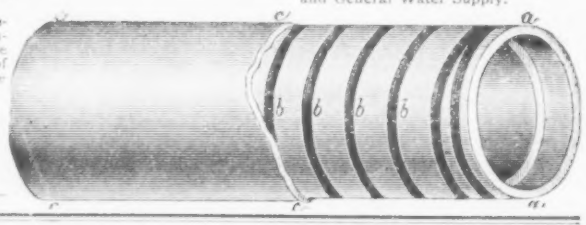

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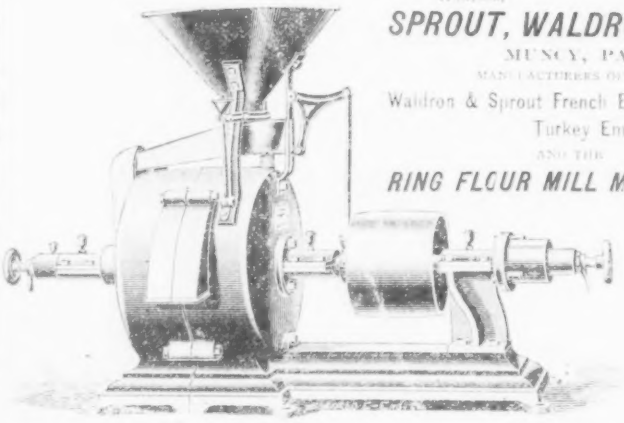

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